

CALCUTTA UNIVERSITY
B. A. PAPERS
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B. A. Examination.

1909

ENGLISH.

First Pass Paper

Section I.

1. Briefly narrate the historical events included in section of Julius Caesar.

Or, 2. Examine and exemplify the oratorical and the controversial powers shown by Shakespeare in this tragedy.

3. Describe Shakespeare's fairies both in their individual aspects, physical and in their social life. Quote freely. Say what you think they may personify or represent.

Or, 4. Illustrate Shakespeare's knowledge of Greek literature and legend from his characterisation of Theseus and Hippolyta, quoting all references to their history and circle. How do you justify the combination with these of the "rude mechanicals"?

5. What is the meaning in these plays of—Jealous, Cautelous, quarrel, Juvenal, sympathy, favour, mis-prision exhalation, enamelled, gossip pensioner?

6. Annotate, giving the meaning and context, and referring to the words in *italics* :—

(a) Signed in thy spoil and crimsoned in thy lethe.

(b) Omitted, all the voyage of their life.
Is bound in shallows and in miseries.

(c) And turn pre-ordain'd and first decree.
Into the law of children.

(d) Quenched in the chaste beams of the

(e) The best in this kind are but shadows ; and the worst are
no worse if imagination amend them.

(f) The riot of the typsy Bacchanals.
Thuring the Thracian singer in their rage.

Section II.

N. B.—Two of the first three questions and two of the second three are to be answered.

1. Define the terms : Song, sonnet, ode, pastoral, naming a good example of each in your text. How do you describe the verse of L' Allegro, Lycidas, the ode to Cromwell, the poem to Althea ?

2. (a) He raised a mortal to the skies.

She drew an angel down.

(b) He shook his mitred look and stern bespake.

(1) Explain these two passages, giving context and allusions.

(2) What hostile criticism has been made or may be suggested to each case ?

(3) In the second instance discuss the question of appropriateness.

3. Annotate the following phrases, giving the meaning and context :—Fancy child, Tuscan air, Lydian measures, linked sweetness, sceptred pall, that Divine idea, storied windows richly light, Deity's purple altar.

4. Write in simple lucid prose—

She brought us Academic silks, in hue
The lilac, with a silken hood to each
And zoned with gold : and now when these whereon,
And we as rich as moths from dust cocoons
She, court-seying her obeisance, let us know,
The Princess Ida waited : out we paced,
I first, and following through the porch that sang
All round with laurel, issued in a court
Compact of lucid marbles, boss'd with lengths
Of classic frieze, with ample awnings gay
Betwixt the pillars, and with great urns of flowers.
The Muses and the Graces grouped in threes
Enring'd a billowing fountain in the midst.

5. Annotate—

(a) Ithacensian suitors.

(b) Valkyrian hymns.

(c) Lar and Lucumo.

(d) Sphered up, with Cassioperia or the enthroned
Persephone in Hades.

(e) High-arched and ivy-clasped
Of finest Gothic, lighter than a fir.

(f) The gaunt old Baron with his beetle brow
Sun-shaded in the heat of dusty fights.

- (g) **Their sinless faith**
 A maiden moon that sparkles on a sky
 Glorifying clown and satyr.

6. Name by quoting the first lines of all the lyrics in the Princess ; remarking on the merit or peculiarity of each, and indicating its relation (if any) to the purpose of the poem as a whole.

Second Pass Paper

First Half.

1. Write notes on—

- (a) Burke's prophecy of a military despotism in France.
 (b) Burke's conception of freedom.
 (c) The French Parliaments.

Or Reproduce the substance of Burke's arguments on the function of the nobility, the manner in which the French nobles had discharged that function, and the treatment which they had received at the Revolution.

2. Explain the following with reference to the context :—

- (a) The vice of the ancient democracies and one cause of their ruin was, that they ruled, as you do, by occasional decrees.
 (b) It is one of the excellencies of the method in which time as amongst the assistants, that its operation is slow, and in some cases almost imperceptible.
 (c) I certainly defer to Dr. Brice's authority a good deal more in these speculations, than I do in his general politics.
 (d) Your affairs, in spite of us, are made a part of our interest : so far at least as to keep at a distance your panacea, of your plague.
 (e) The objections of these speculatists, in its forms do not quadrate with their theories, and are as valid against such an old and beneficent government as against the most violent tyranny, or the greenest usurpation.

3. Write a single sentence on each of the following :—

'The Metaphysic knight,' 'fixed air,' 'the Mamalukes,' 'John Doe,' 'constructive property,' 'commendatory abbots,' 'The two principles of conservation and correction,' 'confederations,' 'Delos,' 'the chequer,' 'grand climacteric,' 'who now reads Bolingbroke ?'

Second Half.

Only four questions to be answered.

1. Reproduce the substance of Johnson's remarks on Samson Agonistes and Paradise Regained. Show by quotation or reference to his life of Milton how prejudiced he was against Milton.

2. Give an account of two of Dryden's satirical poems; and an estimate of his character.

3. Write a brief essay on 'The Spectator; its authors, its aim and result and its literary form'.

4. Sketch the characters and doings of—

(a) Dunstan Cass, (b) Nancy Lammeter, (c) Dolly Winthrop.

5. Write notes on 'the rainbow,' 'the worship of chance,' 'the essential attributes of a lady,' 'seated on a pillion and attired in a drab Joseph,' 'two sick friends cannot live together,' a kind of middle composition between translation and original design,' 'a broken metaphor,' 'he was nature through the spectacles of books.'

Third Pass Paper.

From Macaulay's Essay on Milton.

1. That from which the public character of Milton derives its great and peculiar splendour still remains to be mentioned. If he exerted himself to over-throw king and a persecuting hierarchy, he exerted himself in conjunction with others. But the glory of the battle which he fought for the species of freedom which is most valuable and which was then the least understood, the freedom of the human mind, is all his own. Thousands and tens of thousands among his contemporaries raised their voices against ship-money and the star-chamber. But there were few indeed who observed the more fearful evils of moral and intellectual slavery and the benefits which would result from the liberty of the press and the unfettered exercise of private judgment. These were the objects which Milton justly conceived to be the most important. He was desirous that the people should think for themselves as well as tax themselves, and should be emancipated from the domination of prejudice as well as from that of Charles.

Express in your own words what Macaulay here says of Milton's best title to praise in his public capacity.

2. **Courage in face of danger.**

That elder Leader's calm reply
In steady voice was given.

"In man's most dark extremity

Oft succour dawns from Heaven.
 Edward, trim thou the shatter'd sail,
 The helm be mine, and down the gale,
 Let our free course be driven ;
 So shall we'scape the western bay.
 The hostile fleet, the unequal fray,
 To safely hold our vessel's way.
 Beneath the castle wall ;
 For is hope of safety rest,
 'Tis in the sacred name of guest,
 Who seeks for shelter, storm-distress'd.
 Within a chieftain's hall.
 If not---it best beseems our worth,
 Our name, our right, our lofty birth,
 By noble hands to fall."

Give fully in your own words the substance of the leader's calm reply in the above extract from the first canto of Scott's *Lord of the Isles*.

3. Write an essay on one of the following subjects :—

(*c*) The use of misuse of vacations.

(*b*) "For courtesie amongst the rudest breeds,
 Good will and favour... .."

1910

ENGLISH.

First Pass Paper.

1. Concert with the action of the scenes in which they occur any six of the following extracts, and add brief notes to bring out the sense where a word or phrase needs it :—

(*a*) I am glad this parcel of wooers are so reasonable ; for there is not one among them but I dote on his very absence and I pray God grant them a fair departure.

(*b*) Thou art too wild, too rude and and bold of voice,
 Parts that become thee happily enough,
 And in such eyes as ours appear not faults ;
 But where thou art not known, why there they,
 Something too liberal.

(*c*) When I told you.

Thy state was nothing, I should then have told you
 That I was worse than nothing ; for, indeed,
 I have engaged myself to a dear friend,

Engaged my friend to his mere enemy
To feed my means.

- (d) He is well paid that is well satisfied ;
And I delivering you, am satisfied,
And therein do account myself well paid ;
My mind was never yet more mercenary.
- (e) Let me have men about me that are fat,
Sleek-headed men, and such as sleep o'l nights.
- (f) O constancy, be strong upon my side !
Set a huge mountain 'tween my heart and tongue
I have a man's mind, but a woman's might.
- (g) Under your pardon, you must note beside
That we have tried the utmost of our friends.
Our legions are brim-full, our cause is ripe ;
The enemy increaseth every day ;
We, at the height, are ready to decline
- (h) His life was gentle, and the elements
So mix'd in him that Nature might stand up.
And say to all the world, 'This was man'.

2. How far does Shakespeare in his Julius Caesar follow history exactly ? Describe the 'Trial scene in the Merchant of Venice.

3. Write brief explanatory notes on five of the following :--

- (a) Nothing undervalued.
To Cato's daughter, Brutus' Portia.
- (b) Madam, although I speak it in your presence amity.....
- (c) A Daniel came to judgment ! yea, a Daniel !
- (d) Nothing is good I see without respect ;
Methinks it sounds much sweeter than by day.
- (e) O conspiracy,
Shamest thou to show thy dangerous brows by night.
What evils are most free ?
- (f) Therefore I took your hands, but was indeed
Sway'd from the point by looking down on Caesar :
- (g) I only speak right on ;
I tell you that which you yourselves do know.....
- (h) These many then shall die : their names are prick'd.

4. Explain and relate the story of the quest of the Holy Grail as told by Tennyson.

And some among you held, that if the king
Had seen the right he would have sworn the vow :
Not easily, seeing that the king must guard
That which he rules, and is but as the hind
To whom a space of land is given to plough,

Who may not wander from the allotted field
Before his work be done,—”

What light does this passage throw on the interpretation of the allegory?

5. Write brief notes on any four :—

- (a) For good ye are and bad, and like to coins.
Some true, some light, but everyone of you
Stamp'd with the image of the king
- (b) And when she came to speak, behold her eyes
Beyond my knowing of them, beautiful,
Beyond all knowing of them wonderful,
Beautiful in the light of holiness,
- (c) For where the roofs
Tetter'd toward each other in the sky,
Met fore-heads all street of those
Who watch'd us pass . . .
- (d) And found a people there among their crags,
Our race and blood, a remnant that are left
Pay him amid their circles . . .
- (e) A square-set man and honest, and his eyes
An out-door sign of all the warmth within,
Smiled with his lips . . .

6. Write notes in explanation of any five of the following extracts, adding the subject the poem, and author's name (if known):—

- (a) Nor yet grown stiffer with command,
But still in the Republic's hand—
How fit he is to sway
That can so well obey!
- (b) Fame is the spur that the clear spirit doth raise
(That last infirmity of noble mind)
- (c) Sceptre and Crown
Must tumble down,
And in the dust be equal made
With the poor crooked scythe and spade.
- (d) Thou earthly Comforter! whose love
So indefeasible might be
That, when my spirit woun'd above,
Hers could not stay, for sympathy.
- (e) What, were ye born to be,
An hour or half's delight.
And so to bid good-night?
'Twas pity Nature brought ye forth,
Merely to show your worth,
And lose you quite.

- (f) Such strains as would have won the ear
Of Pluto, to have quite set free
His half-regain'd Eurydice...
- (g) He sung Darius, great and good
By too severe a fate
Fallen, fallen, fallen, fallen,
Fallen, from his high estate...
7. Explain with the help of their context in the poems from which they come, six of the following:—
- (a) The oracles are dumb ;
No voice or hideous hum
Runs through the arched roof in tones deceiving...
- (b) They also serve who only stand and wait.
- (c) In small proportions we just beauties see ;
And in short measures life may perfect be.
- (d) Bid me to live, and I will live
Thy Protestant to be...
- (e) Stone walls do not a prison make
Nor iron bars a cage.
- (f) Society is all but rude
To this delicious solitude.
- (g) Or what (though rare of later age,)
Ennobled hath the bus-kin'd stage.
- (h) He cast (of which we rather boast
The Gospel's pearl upon our coast.

Second Pass Paper.

1. State Burke's argument on Price's claim that the English Revolution established a right 'to frame a government for ourselves,' and explain the analogy by which he illustrates and defends his view of the policy of 1689.

2. What does Burke say on (a) the merits of the parliaments, (b) the objects of a financier ; and what were the errors of the French government in these two connexions ?

3. For what were the following men distinguished and why they are mentioned in the *Reflections*—Fenelon, Mazarin, Lucan, Diderot, Necker, Rousseau.

4. Annotate, showing the meaning, and remarking on the words italicized :—

- (a) The old feudal and chivalrous spirit of *fealty*.
(b) Which, with all its defects, redundancies, and errors is the collected *reason* of ages.

(c) The engagement and *pact* of society, which generally goes by the name of the constitution, forbids such invasions and such surrender.

(d) The vice of the ancient *democracies*, and one cause of their ruin, was that they ruled, as you do, by occasional decrees.

(e) It is a worse preservative of a general constitution than the *syntaxis* of Crete or the confederation of Poland.

5. To what kind or subdivision of drama does each of the following belong, and what is its special characteristic—Samson Agonistes, Rosamond, Conquest of Granada, the Rehearsal, King Arthur, the Spanishtrari?

Give the substance of Johnson's criticism of the first two.

6. Name, with dates, the satirical works of Dryden and Pope; and show on what plain or after what model each is written. How do the two poets differ as satirists?

7. What was Swift's ideal of a good prose style, and how far did he succeed in realizing his aims? What figurative qualities are most prominent in his words? Compare him and Johnson as masters of of prose, referring to style or purpose, or the general value of their works.

8. Explain the following expressions as used or expounded in your text:—Poetical diction, cumbrous splendour, ruling passion, judge of propriety one of our earliest examples of correctness, satyrs and fauns with cloven heel.

9. Trace the effect on the mind and character and life of Silas Marner of fortune or misfortune.

10. Describe (a) Raveloe in its outward appearance, (b) the keeping of Christians, (c) the squire, and his social position (d) the Rector, (e) one of the Misses Lammetter.

Third Pass Paper.

The great source of both the misery and disorders of human life seems to arise from overrating the difference between one permanent situation and another. Avarice overrates the difference between poverty and riches: ambition, that between a private and a public station: vain glory, that between obscurity and extensive reputation. the person under the influence of any of those extravagant passions is not only miserable in his actual situation, but is often disposed to disturb the peace of society, in order to arrive at that which he so foolishly admires. The slightest observation however, might satisfy him that in all the ordinary situation of human life, a well-disposed

mind may be equally calm, equally cheerful and equally contented. Some of these situations may no doubt, deserve to be preferred to others : but none of them can deserve to be pursued with that passionate ardour which drives us to violate the rules either of prudence or of justice ; or to corrupt the future tranquillity of our minds either by shame from the remembrance of our own folly, or by remorse from the honour of our own injustice.

Wherever, prudence does not direct, wherever justice does not permit the attempt to change our situation, the man who does attempt it plays at the most unequal of all games of hazard and stakes everything against scarce anything. In the most glittering and exalted situation that our idle fancy can hold out to us the pleasures from which we propose to derive our real happiness are almost always the same with those which in our actual though humble station we have at all times at hand and in our power. Except the frivolous pleasures of vanity and superiority, we may find in the most humble station where is only personal liberty, every other which the most exalted can afford, and the pleasures of vanity and superiority are seldom consistent with perfect tranquillity, the principle and foundation of all real and satisfactory enjoyment.

Summarize in your own words what the author of the above extract says as to the essential 'Equality of human lots'.

Old age.

2. 'The seas are quiet when the winds give o'er :

So calm are we when passions are no more.

For them we know how vain it was to boast

Of fleeting things, so certain to be lost.

Clouds of affection from our younger eyes,

Conceal that emptiness which age deserves.

The soul's dark cottage, batter'd and decay'd,

Lets in new light through chinks that Time

hath made.

Stronger by weakness, wiser men become

As they draw near to their eternal home.

Leaving the old, both worlds at once they view

That stand upon the threshold of the new.

Give in your own words the purport of these stanzas.

3. Write an essay on one of the following subjects.

(a) The need of keeping one's temper under control.

(b) The evils of half-knowledge.

(c) The charms of the Indian Spring Season.

1911.

ENGLISH.

First Half.

1. Describe:—

(a) The scene in the lists at Coventry.

(b) Portia's return to Belmont.

Or,

Quote as much as you remember of John of Gaunt's praise of England.

2. Explain by whom and in what circumstances the words of the following extracts (any) four were spoken. Give also in each case the simple meaning briefly.

(a) My dear, dear lord,

The purest treasure mortal times afford

Is spotless reputation : that away,

Men are but gilded loam and painted clay,

(b) All places that the eye of heaven visits

Are to a wise man parts and happy heavens.

(c) As I was banish'd I was banish'd Hereford :

But as I come, I come for Lancaster.

(d) Not all the water in the rough rude sea

Can wash the balm off from an annointed king.

(e) The shadow of your sorrow hath destroy'd

The shadow of your face,

(f) I wasted time, and now doth time waste me :

For now hath time made me his numbering clock

2. In what senses, differing from present usage, does Shakespeare use the following words (any eight).

At once, convey, danger, nominated, presently, remorse excess, lecture, security, sensible, worthy ?

4. (i) Express in your own words the general sense of any two of the following passages:—

(a) Grat. You look not well, Signor Antonio :

You have too much respect upon the world ;

They lose it that do buy it with much care ;

Believe me, you are marvellously changed.

Ant. I hold the world, but as the world, Grantiano ;

A stage, where every man must play a part,

And mine a sad one.

Grat. Let me play the fool

With mirth and laughter let old wrinkles come ;

And let my liver rather heat with wine.

Than my heart cool with mortifying groans.
 (b) You see me, Lord Bassanio where I stand,
 Such as I am : though for myself alone
 I would not be ambitious in my wish.
 To wish myself much better : yet for you
 I would be trebled twenty times myself ;
 A thousand times more fair ten thousand times
 more rich :

That only to stand high in your account,
 I might in virtues, beauties, livings, friends,
 exceed account !

(c) Give me your hand, Bassanio ; fare you well !
 Grieve not that I am fallen to this for you :
 For herein Fortune shows herself more kind
 Than is her custom : it is still her use
 To let the wretched man outlive his wealth,
 To view with hollow eye and wrinkled brow
 An age of poverty from which lingering penance
 Of such misery doth she cut me off.

(ii) Continue from memory any one (or more) of the above passages.

Second Half.

Give an outline either of Gray's Elegy or Cowper's poem on his picture ; illustrating, where you can appropriately, with some of the best lines.

(b) (i) Give the meaning simply expressed, of three of the following : —

(a) And tho' sometimes, each dearly pause between,

Dejected Pity at his side

Her soul subduing voice applied

Yet still he kept his wild unalter'd mien

While each strain'd ball of sight seemed bursting from his head

(d) He passed the flaming bounds of Place and Time

The living Throne, the sapphire blaze,

Where angels tremble, while they gaze

He saw ; but, blasted with excess of light,

Clos'd his eyes in endless night,

Of whom is this written !

(e) In the midst a form driven !

Her eye proclaims her of the Briton-line ;

Her lion port, her awe-commanding face,

Attenuer'd sweet to virgin-grace :

Explain the allusions.

(d) The Sun's rim dips ; the stars rush out ;
At one stride comes the dark.

With far-heard whisper o'er the sea
Off short the spectre bark
We listened and looked sideways up !
Fear at my heart, as at a cup
My life blood seemed to sip ;

(ii) Explain in close relation to the poem of which they are part:—

(e) We will grieve not, rather find
Strength in what remains behind,
In the primal sympathy
Which having been must ever be ;
In the soothing thoughts that spring
Out of human suffering ;
In the faith that looks through death,
In years that bring the philosophic mind.

(f) He spoke of love, such love as spirits feel
In worlds whose course inequable and pure ;
No fears to beat away — no strike to heat —
The past unsighed for and the future sure ;
Spake of heroic arts in graver mood
Revived, with finer harmony pursued.
Of all that is most beautiful.
Quote, if you can, the next five lines.

7. Relate to the context and explain any six—

- (a) "God make thee good as thou art beautiful"
Said Arthur, when he dubb'd him knight.
(b) And down the long beams stole the Holy' Grail
All over cover'd with a luminous cloud
(c) And glad was I and clomb, but found at top
No man, nor any voice.
(d) O son, thou hast not true humility
The highest virtue mother of them all.
(e) Storm at the top, and when we gain'd it, storm
Round us and death.
(f) Rejoice, small man, in this small world of mine and thro'
the gap
(g) The seven clear stars of Arthur's Table Round.
(h) 'Doubt not, go forward ; if thou doubt, the beasts
will tear thee piecemeal.'

8. Compare King Arthur's view of the search for the Holy Grail with Sir Percival's.

ENGLISH.

Second Pass Paper.

Group A.

1. Give the substance of Burke's characterisation of George Grenville, and illustrate therefrom his estimate of the value of law as an instrument of mental discipline.

Or,

Characterize Burke as a political thinker and an orator, illustrating your answer by reference to his utterances on the question of American conciliation.

2. Explain the circumstances which, according to Burke, contributed to the growth of a fierce spirit of liberty among the American colonists.

Or,

Illustrate, after Burke, the importance of having large and liberal ideas in the growth of great affairs.

3. Write explanatory notes on any three of the following :—

(a) A matter of supply, that sacred and reserved right of the Commons.

(b) The Act of Navigation, the corner-stone of the policy of this country with regard to its colonies.

(c) In the teeth of all the old mercenary Swiss of state.

(d) The Parliament of Great Britain sits at the head of her extensive empire in two capacities.

4. Annotate, with reference to the context, any four of the following, pointing out in each case the main underlying thought of argument in the passage :—

(a) Show the thing you contend for to be reason : show it to be the means of attaining some useful end ; and then I am content to allow it what dignity you please.

(b) He made an administration so checkered ; and speckled ; a cabinet so variously inlaid ; such a piece of diversified Mosaic ; here a bit of black stone, there a bit of white ; patriots and courtiers, king's friends and republicans ; that it was indeed a very curious show ; but utterly unsafe to touch and unsure to stand on.

(c) I do not enter into the metaphysical distinctions ; I hate the very sound of them.

(d) It is not what a lawyer tells me I may do, but what reason and justice tell me I ought to do.

(e) When a man is robbed of a trifle on the highway, it is not the two pence lost that constitutes the capital outrage.

(f) All government is founded on compromise and barter.

Second Half.

Group B.

5. What difference is noticeable in Shakespeare's handling of the materials respectively supplied by Holinshed and North's Plutarch ?

6. Write an appreciation of Shakespeare's dramatic method.

7. Discuss the adequacy of the classification of Shakespeare's plays as Comedies, Histories and Tragedies.

Amplify the statement that the impression is the play.

8. Explain the following statement, and indicate what you consider to be the special characteristic of Shakespeare's maturer style :—

Shakespeare's was the age before the Academies.

9. Elucidate Professor Raleigh's remarks of the nature and significance of the sonnets of Shakespeare.

10. Indicate the main drift of professor Raleigh's remarks on the achievement of the romantic critics of Shakespeare.

Group C.

11. What light does A Tale of Two Cities throw (a) on the condition of the French peasantry on the eve of the French Revolution, and (b) of the state of penal laws in England during the latter half of the eighteenth century ?

12. Indicate the source from which the historical materials incorporated in his Tale are mainly derived by Dickens, and remark on his skill in the handling of these materials. Briefly describe the character of Madame Defarge, and contrast her death with that of Sydney Carton.

13. Annotate the following declaration of Monsieur the Marquis in his Chateau :—

We have lost many privileges ; a new philosophy has become the mode ; and the assertion of our station in these days might cause us real inconvenience. All very bad, very bad.

ENGLISH.

Third Pass Paper.

1. Give in your own words, the substance of the following extracts in which Ruskin distinguishes between two classes of books :—

So though bound up in a volume, the long letter which gives you so pleasant an account of the lanes and roads and weather last year at such a place, or which tells you that amusing story or gives you the real circumstances of such and such events, however valuable for occasional reference, may not be in the real sense of the world, a book at all, nor in the real sense, to be read. A book is essentially not a talked thing, but a written thing : and written not with the view of mere communication but of permanence. The book is printed only because its author cannot speak to thousands of people at once ; if he could he would—the volume is mere multiplication of of his voice. You cannot talk to your friend in India ; if you could you would ; you write instead, that is mere conveyance of voice. But a book is written, not to multiply the voice merely—not to carry it merely, but to preserve it. The author has something to say which he perceives to be true and useful, or helpfully beautiful. So far as he knows, no one else can say it. He is bound to say it clearly and melodiously, if he may ; clearly, at all events. In the sum of his life he finds this to be a thing, or group of things, manifest to him :—this the piece of true knowledge, or sight, which his share of sunshine and earth has permitted him to seize. He would fain set it down for ever ; engrave it on rock, if he could ; saying. 'This is the best of me for the rest I ate, and drank, and slept loved and hated, like another my life was as the vapour, and is not, but this I saw and knew, this, if anything of mine, is worth your memory. That is his writing, it is in his small human way, and with whatever degree of true inspiration, is in him, him inscription or scripture. This is a Book'.

2

A comparison.

The lapse of time and rivers is the same.
 Both speed their journey with a restless stream ;
 The silent pace with which they steal away
 No wealth can bribe, no prayers persuade to stay ;
 Alike irrevocable both when past ;
 And a wide ocean swallows both at last,
 Though each resemble each in every part,
 A difference strikes at length the musing heart ;
 How laughs the land with various plenty crowned !
 But time, that should enrich the nobler mind,
 Neglected, leaves a dreary waste behind.

Draw out in your own words the comparison which the poet Cowper here makes.

Second Half.

3. Write an essay on one of the following subjects :—

- (a) 'Tis folly of wasting time.
- (b) Moral courage.
- (c) 'Tis education forms the common mind,
Just as a twig is bent the tree's inclined.

1912.

ENGLISH.

First Pass Paper.

First Half.

1. Write out or give the substance of the songs of Amiens and explain their appropriateness to their occasions.

Or, Characterise the melancholy of Jacques, and give the substance of his comments "upon the sobbing deer."

2. In what senses, differing from present usage, are the following words used by Shakespeare (any four) :—

Argument ; humorous ; practices ; taxation ; unexpressive.

3. Write brief explanatory notes on any three or the following and refer them to their context :—

(a) Like Juno's swans,
Still we went coupled and inseparable.

(b) And then the justice.
With eyes severe and beard of formal cut,

(c) Full of wise saws and modern instances.
(d) It is the right buttermen's rank to market.

(e) Dead shepherd, now I find thy saw of night.

(f) Your "If" is the only peace-maker ; much virtue in "If".

4. Give the substance of the soliloquy of King Richard in Pymfret Castle, and explain its dramatic significance.

Or, Compare the character of Richard II with that of Bolingbroke.

5. Explain the following (any three) :—

(a) My oil-dried lamp and time-bewasted light.

(b) Imp out our drooping country's broken wing.

(c) Like glistening Phaethon, wanting manage of unruly jades.

(d) Rue, even for ruth, here shortly shall be seen.

6. Write explanatory notes on any two of the following, and refer to their context :—

- (a) The setting sun and music at the close,
As the last taste of sweets, is sweetest last,
Write in remembrance more than things long past.
- (b) As a long-parted mother with her child
Plays fondly with her tears smiles in meeting.
So, weeping, smiling, greet I thee, my earth,
And do the favours with my royal hands.
- (c) The wavering commons :—their love
Lies in their purses and and who empties them
By so much fills their heart with deadly hate.
- (d) Within the hollow crown
That rounds the mortal temples of a king
Keeps Death his court and there the antic sits,
Scoffing his state, and grinning at his pomp.

Second Half.

7. Give the substance of Gray's reference to (a) Shakespeare. (b) Milton, and (c) Dryden.

Briefly compare Collins and Gray as lyric poets.

What is meant by an Ode? Give an analysis of any one of the great English odes with which you are familiar, and illustrate therefrom some of the main characteristics of an ode.

9. (a) How is the following idea developed in the poem in which it occurs?

(i) Our birth is but a sleep and forgetting.

Or, (ii) Time has but half succeeded in his theft.

(b) Explain with reference to the context any two of the following :—

(i) Loose his bread, and hoary hair.

(ii) Learn by a mortal yearning to ascend
Seeking a higher object,

(iii) Heaven lies about us in our infancy.

(iv) A noise like of a hidden brook

In the leafy mouth of June.

10. Show that the Princess is reminiscent of the experience of Tennyson's youth. Elucidate the causes of the failure of Id'as scheme.

Or, What inference may be legitimately drawn from the Princess regarding :—

(a) Tennyson's view of womanhood, and (b) His attitude towards the woman question of the modern world?

11. Write explanatory notes on any two of the following and refer them to their context :—

- (a) This fine old world of ours is but a child
Yet in the go-cart ; Patience ? Give it time
To learn its limbs : there is a hand that guides.
- (b) When'er she moves
The Samian Hero rises and speaks
A Memnon smitten with morning Sun.
- (c) Our echoes roll from soul to soul.
And grow for ever and for ever.
- (d) I've heard that there is iron in the blood.
And I believe it.

Second Pass Paper.

First Half.

Group A.

1. Give the substance of Burke's characterization of Charles Townshend and illustrate therefrom some of the peculiarities of Burke's oratorical style.

Or, Illustrate the statement that Burke's speeches on the American question are animated by a strong feeling for justice and freedom and advocate a generous interpretation of expediency.

2. Amplify, after Burke, the proposition that great men are the guideposts and landmarks in the state.

3. What are Burke's objections to the use of force in dealing with the American colonists ? What, according to him, are the several possible 'ways, of proceeding relative to their stubborn spirit' ? What is the plan which he advocates, and what are his reasons for the attitude which he takes up ?

4. Annotate with reference to the context any six of the following, bringing out in each case the special significance of the underlying thought or argument in the passage :—

(a) Men too much conversant in office are rarely minds of remarkable enlargement.

(b) The House of Commons has a collective character of its own.

(c) On this solid basis fix your machines, and they will draw worlds towards you.

(d) It is the nature of all greatness not to be exact.

(e) Liberty inheres in some sensible object.

(f) It is the diffidence of dissent.

(g) We have taught the husbandman piously to believe in the mysterious virtue of wax and parchment.

(h) We must give away some natural liberty to enjoy civil advantages.

Second Half.

Group B.

Any three of the following questions.

5. Write a note on the position of actors and dramatists in the England of Shakespeare's day, illustrating your answer by reference to some of the known facts of Shakespeare's life.

6. What inferences regarding Shakespeare's political opinions may be legitimately drawn from his historical plays?

7. Amplify after Raleigh, and comment on the great commonplace of criticism which compares Shakespeare with nature.

8. Examine the statement that the kind of Comedy, which has been most famous and most influential in the world's history is satirical comedy. Characterize this satirical Comedy, and distinguish it from Shakespeare's Comedy.

9. Annotate with reference to the context any four of the following:—

(a) The indispensable preliminary for Judging and enjoying Shakespeare is not knowledge of his history, but knowledge of his theme.

(b) The central drama of Shakespeare's mind is the tragedy of the life of imagination.

(c) Holofemners is the complete academic grammarian.

(d) Books were licensed and guarded; but in talk there was free trade.

(e) What the love of power was to Marlowe, the love of beauty was to Shakespeare.

Group C

Any two of the following questions.

10. Write a note on the female characters in Tale of Two Cities.

11. How did the idea of writing A Tale of two Cities come to Dickens?

Elucidate the statement that the story is remarkable for its dependence on incident rather than on character.

12. Annotate with reference to the context:—

I see a beautiful city and a brilliant people rising from the abyss and in their struggles to be truly free in triumphs and defeats, through long long years to come, I see the evil of this time and of the previous

time of which this is the natural birth, gradually making expiation for itself and wearing out.

**Third Pass Paper.
First Half.**

1. Give in your own words the substance of any two of the following, bringing out clearly the leading idea in each extract :—

(a) The friendship of Schiller and Goethe forms a delightful chapter in their history. Sincerity, true estimation of each other's merits, true sympathy in each other's character and purposes appear to have formed the basis of it, and maintained it unimpaired to the end. Goethe, we are told, was minute and sedulous in his attention to Schiller, whom he venerated as a good man and sympathized with as an afflicted one ; when in mixed companies together, he constantly endeavoured to draw out the stores of his modest and retiring friend, or to guard his sick and sensitive mind from annoyances that might have irritated him. These are things which it is good to know that there are literary men who have other principles besides vanity ; who in their solicitude about fame do not forget the common charities of nature in exchange for which the fame of most authors were but a poor bargain.

(b) The absolute disdain of all lying is especially to be insisted on in the early education of young people. It should be pointed out to them with continual earnestness that the essence of lying is in deception, not in words a lie may be told by silence, by equivocation, by the accent on a syllable, by a glance of the eye attaching a peculiar significance, and all these kinds of lies are worse and baser by many degrees than a lie plainly worded. According to Tennyson's deed and trenchant line, 'A lie which is half a truth is ever the blackest of lies.'

(c) Praise is to an old man an empty sound. I have neither mother to be delighted with the reputation of her son, nor wife to partake of the honours of her husband. I have outlived my friends and rivals. Nothing is now of much importance for I cannot extend my interest beyond myself. Youth is delighted with applause, because it is considered as the earnest of some future good, and because the prospect of life is far extended but to me who am now declining to decrepitude there is little to be feared from the malevolence of men and yet less to be hoped from their affection or esteem. I leave many great designs unattempted, and many great attempts unfinished, my mind is burdened with so heavy crime, and therefore I compose myself to tranquillity except with serene humility that hour which nature cannot delay, and hope to possess in a better state that happiness which there I could not find, and that virtue which here I have not attained.

2. Give the purport of *one* of the following extracts and elucidate its underlying thought :—

- (a) Some future day when what is now is not,
When all old faults and follies are forgot,
And thoughts of difference passed like dreams away
We'll meet again, and feelings born anew,
Our boyhood's bygone fancies we'll review,
Talk o'er old talks' play as we used to play,
And meet again, on many a future day.
- (b) Our little lives are kept in equipoise.
By opposite attractions and desire,
The struggle of the instinct that enjoys,
And the more noble instinct that aspires.
These perturbations this perpetual jar,
Of earthly wants and aspirations high,
Come from the influence of an unseen star,
An undiscovered planet in our sky—

Second Half.

3. Write an essay on *one* of the following subjects :—

- (a) Some books are to be tasted, others to be swallowed, and some few to be chewed and digested.”
- (b) Peace hath her victories no less renowned than War.”
- (c) Self-reverence, self knowledge, self-control,
These three alone lead life to sovereign power.”

1913

First Pass Paper.

1. Indicate for any five of the following passages its bearing on the action of the scene in which it occurs, and add short notes on the words italicised :—

- (a) Therefore take heed how you *impair* our person
How you awake our sleeping sword of war ;
We charge you, in the name of God, take heed...
- (b) And you, good *yeomen*,
Whose limbs were made in England, show us here
The mettle of your posture...
- (c) No, my fair cousin ;
If we are mark'd to die, we are *even*
To do our country loss ; and if to live,
The fewer men, the greater share of honour.

- (d) Master, go on, and I will follow thee,
To the last gasp, with truth and loyalty.
 From seventeen years till now almost four score
 Here lived I, but now live here no more.
- (e) It is a party youth ; not very pretty ;
 But, sure, he's proud, and yet his pride becomes him
 He'll make a *proper* man : the best thing in him is his
 complexion...
- (f) Ah, sirrah, a body would think this was well counterfeited !
 I pray you, tell your brother how well I counterfeited
 Heigh-ho !

2. Illustrate Shakespeare's use of the following words and phrase (any ten) :—a case of lives ; finely bolted ; hooded valour ; wooden ; broken music ; golden world ; the Retort Courteous ; practices ; ceremony ; careful, sequestered.

3. Give an account of the state of feeling in the French and English camps on the night before the battle of Agincourt.

4. Quote the Duke's praise of forest life *As you like it*.
 Or, Describe fully the scene in which Orlando demands food for his old servant Adam.

5. What evidence of the date when it was written are to be found in Shakespeare's *Henry V* ?

Second Half.

1. Explain fully the allusions :—

- (a) Great Fletcher never treads in buskins here,
 Nor greater Johnson dares in socks appear.
- (b) So when bold Homer markes the Gods engage,
 And heav'nly breasts with human passions rage...
- (c) Stuck with the seat that gave Eliza birth,
 We kneel, and kiss the consecrated earth.
- (d) Stern Famine guards the solitary coast,
 Add winter barricades the realms of Frost...
- (e) He gave to Mis'ry all he had, a tear.
 He gained from Heaven ('twas all he wish'd a friend).

2. Relate to their context and explain :—

- (a) Tore the sing's letter, snowed it down, and rent
 The wonder of the loom through warp and woof...
- (b) "They hunt old trails' said Cyrl very well..."
- (c) From brows as pale and smooth,
 As those that mourn half-shrouded over death
 In deathless marble.
- (d) These men are hard upon us as of old...

3. Describe the humorous setting of Mac Flecknoe, and contrast it with the fanciful supernatural machinery used by Pope in the *Rape of the Lock*.

4. Follow out (with appropriate quotations) the theme of Timotheus' song at Alexander's Feast.

5. What are the wishes which Johnson shows to be vain in his poem on *The Vanity of Human Wishes* ? Quote, if you can, the 'petitions' which 'heav'n may hear.'

6. Illustrate from 'The Princess, Tennyson's skill in *expressing sense by sound*, and in *alliteration*.

7. Quote as nearly as you can the Prince's account (at the close of the Princess) of 'distinctive woman-hood' and his ideal of the true relation of wife and husband.

Second Paper.

1. Explain with reference to the context any four of the following passages :—

(a) But the woodman and that farmer, though they work unceasingly, work silently, and no one heard them as they went about with muffled tread.

(b) No garret, no shoemaking, no One Hundred and Five North Tower, now ! He had accomplished the task he had set himself. his promise was redeemed, he had saved Charles.

(c) The storm of sixty three made a wreck of the friendships. I had contracted in the course of many years, yours excepted. which has survived the tempest.

(d) But yours are a sort of fairy habits, such as might belong to Puck or Robin Good fellow, and therefore good as the advice is, I should be half sorry should you take it.

(e) A Corsican lieutenant of artillery : that is the show of him yet is he not obeyed, worshipped after he is sort as all the Tiarred and Diademed of the world put together could not be ?

(f) Nature's own lion-hearted ; Antalus like, his strength is got by *touching the Earth*, his Mother : lift him up from the Earth, lift him up into Hypocrisy inanity, his strength is gone.

2. Elucidate the following extracts :—

(a) Every human creature is constituted to be that profound secret and mystery to every other.

(b) The season of the year which generally pinches off the flowers of poetry unfolds mine.

(c) The miserable millions burst forth into Snasculettism or some other sort of madness.

3. Sketch the characters of Jarvis Lorry and Sudney Carton, indicating the parts played by them in the affairs of Charles Darnay and Lucie Manette.

4. Attempt a short summary of the underlying causes and the attendant horrors of the French Revolution as depicted in *A Tale of Two Cities*.

5. Mention some of the salient features in Dicken's 'dramatic' description of *either* the Dover mail, or the wine shop of Jacques Defarge.

6. Give a concise account of Joseph Hill, the Rev. John Newton and William Hayley and state when and how Cowper made their acquaintance.

6. Amplify the following statement :—Cowper's letters are far more than contributions towards his biography. The graceful affections, pertness, the shrewd estimate of men and things, the genuine love of it and appreciation of it in others, all contribute to make his correspondence delightful !

8. What is Carlyle's conception of a 'hero' ? How does the 'hero' appear as divinity, as prophet, as poet as priest as man of letters and as king ?

9. Show that the essence of Norse Paganism is not so much Morality of Norse not quite unrecognized by Gray.

10. Write a short essay on the Reformation in Germany and Puritanism in Scotland.

Third Paper.

First Half.

1. Give in your own words the substance of the following extracts, bringing out clearly the leading idea in each :—

(a) There is no political power in England like a College in the Universities ; it is not a mere local body, as a Corporation or London Company ; it has allies in every part of the country. When the mind is most impressible, when the character is most ingenuous and the sentiment of reverence is most powerful, the future landowner, or statesman, or lawyer, clergyman comes up to a College in the Universities. There, he forms friendships, there he spends his happiest days ; and whatever is his career the brilliant or obscure, in after years, when he finds himself bound by ties of gratitude and regret to the memories of his college life. He has unconsciously imbibed to the full the beauty and the music of the place. The routine of duties and observances, the examinations and the lectures, the dresses and the ceremonies, the buildings

or gardens that he admired, rest upon his mind and his heart, and the shade of the past becomes a sort of shrine to which he makes continual silent offerings of attachment and devotion. It has a second home not so tender, but more noble and majestic.

(b) There she lay, she had still the winning ways of an English lake: she caught from the smiling heavens unceasing light and changeful phases of beauty and with all this brightness on her face, she yet clung fondly to the be-looking mountain at her side, as though she would.

Soothe him with her finer fancies.
Touch him with her lighter thought.

Or, the political Power of Athens waned and disappeared; centuries rolled away,—they did but bring fresh triumph to the city of the poet? Revolution after revolution passed over the face of Europe, as well as of Greece; but still she was there,—Athens the city of mind,—as radiant, as splendid, as delicate, as young, as ever she had been.

2. Give in your own words the purport of the following lines, and remark on the ideal of life and character which they set forth:—

How happy is he born and taught
That serveth not another's will;
Whose armour is his honest thought
And simple truth his utmost skill;
Whose passions not his masters are,
Whose soul is still prepared for death,
United unto the world by care
Of public fame or private breath
Who God doth late and early pray
More of his grace than gifts to lend;
And entertains the harmless day
With a religious book or friend.
This man is freed from servile bonds
Of hope to rise, or fear to fall;
Lord of himself, though not of lands;
And, having nothing, yet hath all.

Second Half.

Write an Essay on the following subject:—

(a) The choice of a profession in modern India.

1914

First Paper.

First Half.

1. Write explanatory notes on the following, and relate each to its context :—

- (a) And what art thou, thou idol ceremony ?
 What kind of god art thou, that suffer'st more
 Of mortal griefs than do by worshippers ?
 What are thy rents ? What are thy comings in ?
 O ceremony, show me but thy worth !
 What is the soul of adoration ?

(b) The fellows of infinite tongue, that can rhyme themselves
 into ladies' favours, they do always reason themselves out again.
 What ! a speaker is but a prater : a rhyme is but a ballad.

- (c) And God forbid, my dear and faithful lord,
 That you should fashion, wrest, or bow your reading
 Or nicely charge your understanding soul
 With opening titles miscreant, whose right
 Suits not in native colours with the truth.
 Or. Therefore doth heaven divide
 The state of man in divers functions,
 Setting endeavour in continual motion ;
 To which is fixed as an aim or butt,
 Obedience : for so work the honey bees,
 Creatures that by a rule in nature teach
 The act of order to a peopled kingdom.

- (d) A certain aim he took
 At a fair vestal throned by the West
 And loosed his love shaft smartly from his bow,
 As it should pierce a hundred thousand hearts ;
 But I might see young Cupid's fiery shaft
 Quench'd in the chaste beams of the watery moon,
 And the imperial votaress passed on,
 In maiden meditation, fancy-free.

2. What are the sources from which Shakespeare derived his materials for *A Midsummer Night's Dream* ? Examine the evidences which help us to determine the date of the composition of the play.

Or, explain the significance of the sayings and doings of the Athenian handicraftsmen in the play.

Write an appreciation of the character of Theseus. What does he say about 'the lunatic, the lover, and the poet' ?

Second Half

4. Write briefly about the humorous features in the play of *Henry the Fifth*.

1 (a). Give the substance of the speech which Satan delivered on his return from Paradise after the seduction of man.

(b) Illustrate the characteristic excellence of Milton's similes and his skill in the use of proper names.

Or, give, after Milton, an account of building of the portentous' bridge over Chaos.

(c) Develop the thought contained in the following :—
Nor love thy life, nor hate ; but what thou livest
Live well ; how long or short, permit to Heaven.

2. Write explanatory notes on *one* of the following extracts, and refer it to its context :—

(a) Four faces each
Had like a double Jenuis ; all their shape
Spangled with eyes more numerous than those
Of Argus, and more wakeful than to drowse.
Charmed with Arcadian pipe, the pastoral reed
Of Hermes, or his opiate red.

(b) In their room
Wolves shall succeed for teachers, grievous wolves,
Who all the sacred mysteries of Heaven
To their own vile advantages shall turn
Of lucre and ambition.

3. Illustrate from 'Mac Flecnoc' some of the characteristics of Dryden as a satirist. How does Dryden develop the thought—What passions cannot Music raise and quell ?

Explain :—

He rais'd a mortal to the skies ;
She drew an angel down.

Describe the two handmaids of Pope's 'Spleen'. Does Pope say of the Cave of Spleen ?

Explain : —At ev'ry word a reputation dies.

4. Give the substance of Johnson's conclusion to *The vanity of Human Wishes*.

Comment on the following :—

This mournful truth is ev'rywhere confess'd
Slow rises worth, by poverty depress'd.

5 (a) What are the legends which form the basis of Keats poem—*The Eve of St. Agnes*.

(b) Explain the following with reference to the context :—

(i) Like a throbbing star

Seen mid the saphire heaven's deep repose.

(ii) The howling winds drive devious tempest tosse'd.
Sails ript, seems op'ning wide and compass lost
And day by day some currents thwarting force
Sets me more distant from a prosp'rous course.

Second Paper.

First Half.

1. Give an outline of Carlyle's remarks on any *two* of the following :—

(a) The value of books.

(b) The nature of ambition.

(c) The influence of great men.

2. Mention the chief merits of Shakespeare as a poet.

Explain the regard in which he is held by his countrymen.

3. What is Hume's appreciation of Cromwell? Examine the question of Cromwell's ambition.

4. Explain with reference to context *any two* of the following :—

(a) I like, too, that representation they have of the Tree Igdrasil. 'The machine of the Universe'—alas, do but think of that in contrast.

(b) That a Europe with its French Revolution just breaking out, finds no need of a Burns except for guaging beer,—is a thing I, for one, cannot *rejoice* in !

(c) Having once parted with Reality, he tumbles hopeless in vacuity ; no rescue for him.

(d) Faults ? The greatest of faults, I should say, is to be conscious of none !

Second Half.

1. Give a description of a day spent at Olney with the poet Cowper, introducing some of his acquaintances.

2. What are Cowper's views on *any two* of the following subjects ; how far do you agree with him ?—

(a) The poetry of Pope.

(b) Johnson's criticism of Milton.

(c) The beauties of nature.

3. Expand the ideas in the following :—

(a) In fact critics did not originally beget authors ; but authors made critics.

(b) These luminaries seem to have been kindled into a brighter blaze than others, only that their spots might be more noticed.

4. Explain, adding the context, *any two* of the following :—

(a) We can send black puddings and pettoes without giving them a flavour of our egoism ; but language is a stream that is almost sure to smack of a mingled soil.

(b) Every man's work, pursued steadily, tends in this way to become an end in itself and so to bridge over the lowest chasms of life.

(c) 'It's the will of them above as a many things should be dark to us, but there's some things as I've never felt i' the dark about, and they're mostly what comes in the days work.'

5. Describe the scene in which Silas realizes the theft of his gold. Show that this misfortune was a blessing in disguise.

6. Tell how Godfrey confessed his secret to Nancy. Comment on the narrative as a criticism of life.

Third Paper.

First Half.

1. Give in simple English the substance of *one* of the following passages, clearly indicating what you consider to be its leading idea :—

(a) Now, please, let me bring out what I want to say while I am full of it. I say then that the personal influence of the teacher is able in some sort to dispense with an academical system, but that the system cannot in any sort dispense with personal influence. With influence there is life, without it there is none. An academical system without the personal influence of teachers upon pupils, is an arctic winter ; it will create an ice-bound, petrified, cast-iron university, and nothing else. You will not call this any new notion of mine ; and you will not suspect, after what happened to me a long twenty-five years ago, that I can ever be induced to think otherwise. No ! I have known a time in a great school of letters where things went on for the most part by mere routine, and form took the place of earnestness. I have experienced a state of things, in which teachers were cut off from the taught as by an insurmountable barrier ; when neither party entered into the thoughts of the other ; when each lived by and in itself. This was the reign of law without influence, system without personality.

(b) It is related of some good man (I forget who) that upon his death-bed he recommended his son to employ himself in

cultivating a garden, and in composing verses, thinking these to be at once the happiest and the most harmless of all pursuits. Poetry may be, and too often has been, wickedly perverted to evil purposes; what indeed is there that may not, when religion itself is not safe from such abuses! But the good which it does inestimably exceeds the evil. It is no trifling good to provide means of innocent and intellectual employment for so many thousands in a state like ours. It is no trifling good to win the ear of children with verses which foster in them the seeds of humanity and tenderness and piety, awaken their fancy, and exercise pleasurably and wholesomely their imaginative and meditative powers. It is no trifling benefit to provide a ready mirror for the young, in which they may see their own best feelings reflected, and wherein 'whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely,' are present to them in the most attractive form. It is no trifling benefit to send abroad strains which may assist in preparing the heart for its trials and in supporting it under them. Poetry may be called the salt of the earth. Who can tell in our heart-chilling and heart-hardening society, how much more selfish, how much worse we should have been, in all moral and intellectual respects, had it not been for the unnoticed unsuspected influence of this preservative?

2. Give the substance of the following and remark on the lesson which it purports to teach:—

I sorrowed that the golden day was dead,
Its lights no more the countryside adorning;
But whilst I grieved, behold! the East grew red
With morning.

I sighed that merry Spring was forced to go,
And doff the wreaths that did so well become her;
But whilst I murmured at her absence, lo!

'Twas Summer,
I mourned because the daffodils were killed,
By burning skies that scorched my early posies;
But whilst for these I pined, my hands were filled
With roses.

Half broken-hearted I bewailed the end
Of friendships than which none had once seemed nearer;
But whilst I wept, I found a newer friend,

• And dearer.

And thus I learned old pleasures are estranged
Only that something better may be given;
Until at last we find this earth exchanged
To Heaven.

Second Half.

Write an Essay on *one* of the following :—

- (a) Responsibilities of wealth.
- (b) The heights, by great men reached and kept,
Where not attained by sudden flight ;
But they, while their companions slept,
Were toiling upward in the night.
- (c) Reading maketh a full man, conference a ready man ; and
writing an exact man.

1915

First Paper.**First Half.**

1. Explain, stating the occasion on which the lines were spoken :—

- (a) Things base and vile, holding no quantity
Love can transpose to form and dignity ;
Love looks not with the eyes but with the mind ;
And therefore is wing'd Cupid painted blind ;
Nor hath Love's mind of any judgment taste,
Wings, and no eyes, figure unheedy haste,
- (b) Love, therefore, and tongue tied simplicity
In least speak most, to my capacity,
Or, When love begins to sicken and decay,
It useth an enforced ceremony.
- (c) Between the acting of a dreadful thing
And the first motion, all the interim is
Like a phantasma, or a hideous dream ;
The genius and the moral instruments
Are then in council ; and the state of man
Like to a little kingdom, suffers then
The nature of an insurrection.

2. Describe the 'duke's oak' and the rehearsal there. What considerations lead Bottom to be satisfied with the part of *Pyramus* ?

3. How does Cassius seduce 'the honourable metal' of 'Brutus, from that it is disposed' ? What delusions finally decide Brutus to make one of the conspirators ?

4. Describe the death of Brutus. Consider Antony's summing up of his character : this was the noblest Roman of them all.

Or, With what arguments does Demetrius dissuade Helena from following him? How does she answer those arguments? What light do they shed on her character?

Second Half.

5. Trace the course of the Childe's pilgrimage as described in the two first Cantos of *Childe Harold*, describing in detail the scenery around.

either (a) Cintra, or (b) Athens.

6. Explain the allusions in :—
 - (a) 'Tis to the worship of the solemn Horn
Grasp'd in the holy hand of Mystery.
 - (b) And o'er her cliffs a fruitless watch to keep
For him who dared prefer a mortal bride.
 - (c) Land of Albania! where Iskander rose,
Theme of the young, and beacon of the wise.
 - (d) Ambracia's gulf behold, where once was lost
A world for woman, lovely, harmless thing!
7. By what arguments are the following propositions established :—
 - (a) That from us aught incline His will
Hard to belief may seem : yet this will prayer.
 - (b) Thus was the building left
Ridiculous, and the work *Confusion* named.
 - (c) Suffering for truth's sake
Is fortitude to highest victory.
8. Give the substance of the lamentations of (a) Eve and (b) Adam, when they learn that they may no longer dwell in Paradise.
9. Explain the following passage, noticing allusions—

The aggregated soil
Death, with his mace petrific, cold and dry,
As with a trident smote, and fixed as firm
As Delos, floating once; the rest his look
Bound with Gorgonian rigor not to move,
And with asphaltic; broad as the gate
Deep to the roots of Hell the gathered beach
They fastened.....

Second Pass Paper.

First Half.

- (a) Describe the occasion on which the following was spoken :—
"My son, seek for a Kingdom worthy of yourself : for Macedonia will not hold you."

(b) What do we learn from Plutarch regarding the Gymnosophists of India?

Or, Tell the story of the visit of Alexander to Diogenes of Sinope.

2. Dwell on the political situation in Rome on the eve and immediately after the crossing of the Rubico.

3. Say what you know of *Anticato*, and of the probable motives for its composition.

Or, Write a brief note on the relation between Alexander and Aristotle.

4. What does Plutarch say about the festival of the Lupercalia, and about the portents which preceded the assassination of Caesar? Show, by reference to the play of Julius Caesar, the use which Shakespeare has made of the materials supplied by Plutarch in regard to these two points.

Second Half.

5. (a) Show the love of accumulating money grows upon Silas Marner.

(b) Trace the growing influence of Eppie on Merner's life and character.

6. Remark on (a) the character of George Eliot's humour and (b) her portrayal of children, as seen in *Silas Marner*.

Or, Justify the statement that *Silas Marner*, is meant to set in a strong light the remedial influences of pure natural human relations.

7. Give the substance of Cowper's Views on (a) the acquittal of Lord George Gordon, and (b) the character of Dr. Johnson as a critic. Comment on Cowper's attitude towards Madame Guyon.

Or, Amplify the following with reference to the context—

(a) I love the memory of Vinny Bourne.

(b) The Ballad is a species of poetry I believe peculiar to this country.

(c) All the sounds that Nature utters are delightful, at least in this country.

1. Explain with reference to the context any three of the following, adding notes where necessary :—

(a) My leaf-gold is tarnished.

(b) All this time was spent in painting a piece of wood that had no life in it.

(c) There is a roughness on a plum which nobody that understands fruit would rub off, though the plum would be much more polished without it.

(d) The reasons upon which I undertake this Herculean labour and by which I justify an enterprise in which I seem so effectually anticipated by Pope, although in fact he has not anticipated by me at all, I may possibly give you, if you wish for then, I can find nothing more interesting to say.

Third Pass Paper.

1. In spite of evidence, many will still image to themselves the England of the Stuarts as a more pleasant country than the England in which we live. It may at first sight seem strange that society, while constantly moving forward with eager speed, should be constantly looking backward with tender regret.

In truth we are under a deception similar to that which misleads the traveller in the Arabian desert. Beneath the caravan all is dry and bare; but far in advance and far in the rear, is the semblance of refreshing waters. The pilgrims hasten forward and find nothing but sand where an hour before, they had seen a lake. They turn their eyes and see a lake where, an hour before, they were toiling through sand. A similar illusion seems to haunt nations through every stage of the long progress from poverty and barbarism to the highest degrees of opulence and civilization. But if we resolutely chase the mirage backward, we shall find it recede before us into the regions of fabulous antiquity. It is now the fashion to place the golden age of England in times when noblemen were destitute of comforts, the want of which be intolerable to a modern footman, when farmers and shop-keepers breakfasted on loaves the very sight of which would raise riot in a modern workhouse, when to have a clean shirt once a week was a privilege reserved for the higher class of gentry, when men died faster in the purest country air than they now die in the most pestilential lanes of our towns, and when men died faster in the lanes of our towns than they now die on the coast of Guinea. We too, shall in our turn, be outstripped, and in our turn be envied. It may well be, in the twentieth century, that the peasant of the Dorsetshire may think himself favourably paid with twenty shillings a week; that the carpenter at Greenwich may receive ten shillings a day; that the labouring men may be as little used to dine without meat as they now are to eat rye bread; that sanitary police and medical discoveries may have added several more years to the average length of human life; that numerous comforts and luxuries which are now unknown, or confined to a few, may be within the reach of every diligent and thrifty working man. And yet it may then be the mode to assert that the increase of wealth and the progress of science have benefited the few at the expense of the many and to talk of the reign of Queen Victoria as the time when England, was truly merry England, when all classes were bound together by brotherly sympathy, when the rich did not grind the faces of the poor, and when the poor did not envy the splendour of the rich.

Express in your own words the substance and purpose of the above extract from Macaulay's History of England.

2. Androcles from his injured lord, in dread
 Of instant death, to Lybia's desert fled.
 Tir'd with his toilsome flight, and parch'd with heat
 He spied, at length, a cavern's cool retreat,
 But scarce had give'n to rest his weary frame,
 When hugest of his kind, a lion came :
 He roar'd approaching ; but the savage din
 To plaintive murmurs chang'd,—arriv'd within,
 And with expressive looks, his lifted paw
 Presenting, aid implor'd from whom he saw ;
 The fugitive, through terror at a stand,
 Dar'd not awhile afford his trembling hand,
 But bolder grown at length, inherent found
 A pointed thorn, and drew it from the wound.
 The cure was wrought ; he wip'd the sanious blood,
 And firm and free from pain the lion stood.
 Again he seeks the wilds, and day by day
 Regales his inmate with the parted prey ;
 Nor he disdains the dole, though unprepar'd
 Spread on the ground, and with a lion shar'd
 But thus to live—still lost, sequester'd still—
 Scarce seem'd his lord's revenge and heavier ill.
 Home, native home !—Oh might be but repair !
 He must, he will, though death attends him there
 He goes, and doom'd to perish, on the sands
 Of the full theatre unpitied stands !
 When lo ! the self-same lion from his cage
 Flies to devour him, famish'd into rage.
 He flies, but viewing in his purpos'd prey
 The man, his healer, pauses on his way,
 And soften'd by remembrance into sweet
 And kind composure, crouches at his feet.
 Mute with astonishment th' assembly gaze ;
 But why, ye Romans ? whence your mute amaze ?
 All this is nat'ral :—nature bade him rend
 An enemy ? she bids him spare a friend,

Write in your own words the story contained in the above poem.

3. Write an essay on one of following subjects :—

- (a) The responsibilities and opportunities of educated men in modern India.
- (b) The place of woman in the life of our times.
- (c) The dominant tendencies of modern civilization.
- (d) The place of India in the British Empire.

1916

ENGLISH.

First Pass Paper.

First Half.

1. Write a critical note on Shakespeare's conception of the character of *Julius Caesar*.

Or, Indicate some of the views of *Brutus* for which he is usually spoken a political idealist.

2. (a) Write explanatory notes on the following :—

Even by the rule of that philosophy
By which I did blame Cato for the death
Which he did give himself ; I know not how,
But I do find it cowardly and vile,
For fear of what might fall, so to prevent
The time of life : arming myself with patience,
To stay the providence of some high powers,
That govern us below.

(b) Explain the following and indicate the occasion on which it was spoken :—

There is a tide in the affairs of men.
Which, taken at the flood, leads on to fortune ;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat ;
And we must take the current when it serves,
Or lose our ventures.

3. What is the probable date of the composition of *Twelfth Night* ? What facts of interest have a bearing on this point ?

4. Give a careful study of the character of *Viola* or of *Olivia*.

5. Write notes on any three of the following :

I had as lief be Brownist as a politician ; scout me for him at the corner of the orchard like a bum-bailly ; I am afraid this great lubber, the world, will prove a cockney ; like the Egyptian thief at point of death.

Second Half.

6. 'A fictitious character is introduced for the sake of giving some connexion to the piece.' How far are we justified in regarding *Harold* as a purely fictitious ?

7. Give the substance of the poet's picture of Ali's court at Tepaleni.

8. What similes does Milton employ in describing the fallen angles, (a) when they lay 'abject and lost' after their defeat and (b) When they were rousing themselves after Satan's appeal ?

9. 'My sentence is for open war.' By what arguments is this 'sentence' justified, and what light do they throw on the character of the speaker?

10. Explain any four of the following adding notes where necessary :

- (a) When night
Darkness the streets, then wander forth the sons of Belial,
Flown with insolence and wine.
- (b) Our greatness will appear
Then most conspicuous when great things of small,
Useful of hurtful, prosperous of adverse,
We can create, and in what place soe'er
Thrive under evil.
- (c) Who shall tempt with wandering feet
The dark, unbottmed, infinite Abyss,
And through the palpable obscure find out
His uncouth way?
- (d) When granite moulders and when records fail,
A peasant's plaint prolongs his dubious date.
- (e) Well did'st thou speak Athena's wisest son!
'All that know is, nothing can be known.'

ENGLISH—PASS.

Second Paper

First Half.

1. Explain :—

(a) The very breadth of the indictment brings comfort and a means of escape.

(b) Milton, like More, observed the rules of the game.

(c) The trial of *Paradise Lost* runs all through *The Seasons*.

2. Explain any two of the following propositions :

(a) The history of blank verse reflects the phases of the history of the drama.

(b) English verse went Milton-mad during the earlier half of the eighteenth century.

(c) There is a natural vision and spiritual vision : the spiritual belongs to Vaughan.

3. "I did but prompt the age quit their clogs. What origin does Milton ascribe to his prose writings? What was their true origin?"

4. Describe the character of Eve. Of what doctrine has Milton made her the embodiment?

5. Write notes on any five of the following :—absurdity of the

famous art critic, 'verbal curiosity,' ledger school of criticism, virtues of the metaphysical school, turns of words and thoughts, Romantic and Classic, intricacies of Belinda's toilet, philosophical organ-grinders.

6. Give instances of Alexander's (a) self-control, (b) bravery, (c) esteem of his friends.

7. Sketch the relations between Aristotle and his pupil.

8. How did Caesar gain the good-will of his soldiery? Give instances of that good-will and devotion.

9. Sketch, after Alice, Charles's character as a king and as a man. How far was her appreciation correct?

10. Describe Kerneguy's arrival at the Lodge. What do you think of his disguises?

11. Explain in connexion with the context:

(a) With these grave seniors sat their pretty daughters whose study, like that of Chaucer's physician, was not always in the Bible.

(b) There needeth no accuser when the still small voice speak within us.

(c) Faustus raises the devil as the Parliament raised the army.

12. Cromwell and Charles have not been successfully treated; the one has been unduly lowered, the other as unduly elevated. Discuss either of these statements.

ENGLISH—PASS.

Third Paper.

First Half.

1. *Express in your own words the substance and purpose of the following extract.*

I remember to have once seen a slave in a fortification in Flanders, who appeared no way touched with his situation. He was maimed, deformed, and chained: obliged to toil from the appearance of day till nightfall, and condemned to this for life: yet with all these circumstances of apparent wretchedness he sung, would have danced but that he wanted a leg, and appeared the merriest, the happiest man of all the garrison. What a practical philosopher was here! A happy constitution supplied philosophy, and though seemingly destitute of wisdom, he was really wise. No reading or study had contributed to disenchant the fairyland around him. Everything furnished him with an opportunity of mirth and though some thought him from his insensibility a fool, he was such an idiot as philosophers might wish in vain to imitate. They who like him can place themselves on that side of the word in which everything appears in a ridiculous or pleasing light, will find something in every occurrence to excite their good

humour. The most calamitous events either to themselves or others can bring no new affliction ; the whole world is to them a theatre in which comedies only are acted. All the bustle of herosim or the rants of ambition serve only to absurdity of the scene and make the humour more poignant. They feel, in short as little anguish at their own distress or the complaints of others, as the undertaker, though dressed in black, feels sorrow at a funeral.

2. (a) State clearly in few words the subject of the following poem.

(b) Reproduce in your own words the successive picture by which the poet illustrates it ;

Oh, our manhood's prime vigour, no spirit feels waste,
Not a muscle is stopped in its playing, nor sinew unbraced.

Oh, the wild joys of living ! the leaping from rock up to rock—

The strong rending of boughs from the fir-tree the cool silver shock.

Of the plunge in a pool's living water—the hunt of the hare,
And the sultriness showing the lion is couched in his lair.

And the meal—the rich dates—yellowed over with gold dust divine,
And the locust's flesh steeped in the pitcher ; the full draught of wine,

And the sleep in the dried river channel where bull-rushes tell
That the water was wont to go warbling so softly and well.

How good is man's life, the mere living ! how fit to employ

All the heart and the soul and the senses, for ever in joy !

Second Half.

3. Write an essay on *one* of the following subjects :

(a) Ideals of character in ancient and modern India.

(b) The essentials of a true education.

(c) Patriotism, true and false.

(d) 'Peace hath her victories no less renowned than war.'

1917.

ENGLISH—PASS.

First Paper.

First Half.

1. Give the substance of the dialogue between Banquo and Macbeth on the night of Duncan's murder.

Or, Describe the scene in which Macduff is informed of the death of his wife and children.

2. Examine the evidence which helps us to determine the date of the composition of *Macbeth*.

Or,

Discuss the genuineness of the Porter scene in *Macbeth*.

3. 'To-morrow, and to-morrow, and to-morrow'. Give the substance of Macbeth's soliloquy which begins thus. What light does it throw on the character of the speakers?

4. 'The quality of mercy is not strained'. Summarize the speech which begins thus, explain the occasion on which it was spoken, and remark on its dramatic appropriateness.

5. Thou loss upon loss ! the thief gone with so much, and so much to find the thief ; and no satisfaction, no revenge'. Have we here the keynote to Shylocks' character ? Does the treatment meted out to the Jew in the play aim at appealing to our sympathy in his favour ?

6. Write explanatory notes on any *two* of the following :—

(a) Such a hare is madness the youth, to skip o'er the meshes of good counsel the cripple.

(b) How oddly he is suited ! I think he bought his doublet in Italy, his round hose in France, and his behaviour everywhere.

(c) Therefore the poet

Did feign that Orpheus drew trees, stones, and floods,

(d) How like a Younker or a prodigal

The scarfed bark puts from her native bay.

Second Half.

7. Annotate any *four* of the following :—

(a) Thammuz came next behind,
Whose annual wound in Lebanon allured
The Syrian damsels to lament his fate.

(b) When night
Darkness the streets, then wander forth sons
Of Belial, flown with insolence and wine.

(c) Anon they move
In perfect phalanx to the Dorian mood
Of flutes and soft recorders.

(d) From behind the moon,
In dim eclipse, disastrous twilight sheds
On half the nations, and with a tear of change
Perplexes monarchs.

(e) Anon out of the earth a fabric huge
Rose like an exhalation, with the sound
Of dulcet-symphonies and voices sweet.

8. Intend at home,
While here shall be our home, what best may ease
The present misery.

What did the spirit "intend" and how did they pass their time during Satan's absence ?

Or, What if we find

Some easier enterprize ?

What is this 'easier' enterprize, which Beelzebub recommends and by what arguments does he justify his recommendation ?

9. Lausanne ! and Ferney ! ye have been the abodes

Of names which unto you bequeath'd a name.

Give the substance of Byron's characterization of the 'names' associated with Lausanne and Ferney.

10. Write explanatory notes on any *three* of the following, indicating the context in each case ;—

(a) Thou pendulum betwixt a smile and a tear.

(b) Europe's, bulwark' gainst the Ottomite.

(c) The Spouseless Adriatic mourns her lord.

(d) The Niobe of nations.

(e) A young Auroa of the air.

The nympholepsy of some fond despair.

(f) The starry fable of the milky way.

Has not thy story's purity.

Second Paper—First Half.

1. 'Milton has taken a scheme of life for life itself.' How does Raleigh dispose of this explanation of the want of interest in *Paradise Lost* ? What reasons does he give to explain that what of interest ?

2. Sketch, after Raleigh, the character of Satan ; how does Milton attempt to allay his scruples about his portrait ?

3. Explain any *three* of the following statements :—

(a) The burial of *Clovis* was hastened by ridicule.

(b) He writes as if all were Cromwells or Miltons.

(c) To forego all these diluted forms of speech is to run the risk of the scholar's melancholy.

(d) It is Ulysses who is 'reluctant' and Calypso who is 'amorous'.

4. Illustrate *three* of the following :—

(a) In the case of Milton, the imperfection of our sympathy is due to other causes.

(b) The exigencies of controversy revealed in Milton the flash of real wit.

(c) How carefully Milton adjusted the sound to the sense is known to every reader of *Paradise Lost*.

(d) Milton wrings the last drop of value from each word.

Second Half.

5. Sketch the views taken by Royalist and Republican respectively of Shakespeare and Milton.

Describe Woodstock : what incidents in Scott's novel are connected with Rosamond's Tower and the kings' Oak,

6. Describe briefly the scenes in which the following occur :—

(a) What thou dost do quickly.

(b) They are coming hither who shall be called Maher-shalal-hash baz.

(c) You must carry your tricks of fortune-telling to the women of the village.

7. Give the substance of Hood's letter on the uses of literature. Compare his humour with that of Cowper.

8. Explain two of following sentences, adding a brief notice of the writer in each case :—

(a) It is here that letters obtain the noblest triumph.

(b) He seemed on the whole a most loving, kissing, kind-hearted gentleman,

(c) The flat dog made me write flat sonnet.

Third Paper.

1. Give in your own words the substance of the following passage, and comment on its aim and purpose :

We cannot determine what the queenly power women should be, until we are agreed what their ordinary power should be. We cannot consider how education may fit them for any widely extending duty, until we are agreed what is their true constant duty. And there never was a time when wilder words were spoken, or more vain imagination permitted, respecting this question—quite vital to all social happiness. The relations of the womanly to the manly nature, their different capacities of intellect, ~~of~~ of virtue, seem never to have been yet estimated with entire consent. We hear of the "mission" and of the "right" of Woman, as if these could ever be separated from the mission and the rights of Man ;—as if she and her lord were creatures of independent kind, and of irreconcilable claim. This, at least, is wrong. And not less wrong—perhaps even more foolishly wrong (for I will anticipate thus far what I hope to prove)—is the idea that woman is only the shadow and attendant image of her lord, owing him a thoughtless and servile obedience, and supported altogether in her weakness by the pre-eminence of his fortitude. This I say, is the most foolish of all errors respecting her who was made to be the helpmate of man. As if he could be helped effectively by a shadow, or worthily by a slave ! Let us try, then, whether we cannot get at some clear and harmonious idea (it must be harmonious if it is true) of what womanly mind and virtue are in power and office with respect to man's and how their relations, rightly accepted, aid and increase the vigour, and honour, and authority of both.

2. Give the purport of one of the following passages, and elucidate its underlying thought :—

- (a) Here, while the tide of conquest rolls
 Against the distant golden shore,
 The starved and stunted human souls
 Are with us more and more.
 Vain is your Science, vain your Art,
 Your triumphs and your glories vain.
 To feed the hunger of their heart
 And famine of their brain.
 Your savage deserts howling near,
 Your wastes of ignorance, vice and shame,
 Is there no room for victories here,
 No field for deeds of fame ?
 Arise and conquer while you can
 The foe that in your midst resides,
 And build within the mind of Man
 The Empire that abides.

(b) Leave this chanting and singing and telling of beads ! Whom lost thou worship in this lonely dark corner of a temple with doors all shut ? Open thine eyes and see thy God is not before thee !

He is there where the tiller is tilling the hard ground, and where the pathmaker is breaking stones. He is with them in sun and in shower, and his garment is covered with dust. Put off thy holy mantle and even like him come down on the dusty soil !

Deliverance ? Where is this deliverance to be found ? Our master himself has joyfully taken upon him the bonds of creation ; he is bound with us all for ever.

Come out of thy meditation and leave aside thy flowers and incense ! What harm is there if thy clothes become tattered and stained ? Meet him and stand by him in toil and in sweat of thy brow.

Second Half.

3. Write an essay on one of the following subjects :—

- (i) Higher education as a preparation for life.
 - (ii) The emancipation of depressed classes.
 - (iv) The ideal college.
 - (v) The influence of literary study on the formation of character.
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1918

ENGLISH—PASS.

First Paper

First Half.

1. Summarize the estimate of her husband's character given by Lady Macbeth on reading his letter. How far is the estimate justified by his conduct in the course of the play?

2. Explain with reference to the context :—

(a) Was the hope drunk

Wherein you dressed yourself? hath it slept since?
And wakes it now to look so green and pale
At what it did so freely? From this time
Such I account thy love.

(b) If much you note him,
You shall offend him, and extend his passion :
Feed, and regard him not. Are you man?

(c) Bleed, bleed, poor country !
Great tyranny, lay thou thy basis sure.
For goodness dare not check thee ! wear thou thy wrongs.
The title is afraid.

(d) Why should a man, whose blood is warm within,
Sit like his grandsire cut in alabaster?

(e) It were too gross
To rid her cerecloth in the obscure grave.

(f) There's not the smallest orb which thou behold'st
But in his motion like an angel sings,
Still quiring to the young-eyed cherubims.

3. Give a short account of the sleep-walking scene; mentioning the previous incidents in the play to which Lady Macbeth refers.

Either

4. How does Bassanio describe the character of Gratiano? Justify his descriptions from Gratiano's behaviour in the play.

Or, Give the substance of Portia's descriptions of *any two* of her suitors, pointing out instances of her wit.

5. Give instances from *The Merchant of Venice* that point to Shakespeare's knowledge of classical literature and tradition.

Second Half.

1. Write explanatory notes on the following passages referring each to its context :—

(a) Yet not the more

Cease I to wander where the Muses haunt

- Clear spring of shady grove, or sunny hill,
Smit with the love of sacred song.
- (b) In vain, though by their powerful art they bind
Volatile Hermes, and call up unbound
In various shapes old Proteus from the sea,
Drained through a limbeck to his native form.
- (c) Not that fair field
Of Enna, where Proserpine gathering flowers,
Herself a fairer flower, by gloomy Dis
Was gathered,
- (d) Close the serpent sky,
Insinuating, wove with Gordian twine
His braided train, and his fatal guile
Gave proof unheeded.

Either

2. Give the substance of Satan's reflections at the first sight of Adam and Eve.

Or, Summarize Satan's speech to Uriel.

3. Discuss Milton's use of similes. Illustrate your answer by quoting or referring *three* examples.

4. Express in your own words the thought contained in the following lines :

There is a very life in your despair,
Vitality of poison,—a quick root
Which feeds these deadly branches ; for it were
As nothing did we die, but life will suit
Itself to Sorrow's most detested fruit
Like to the apples on the Dead Sea's shore,
All ashes to the taste ; Did man compute
Existence by enjoyment, and count o'er
Such hours' gainst years of life,—say would he name three-score ?

5. Give generally in your own words, but adopting any noteworthy expressions from Byron, *either* his description of the scenes preceding the Battle of Waterloo, or his estimate of the character of Napoleon.

6. Explain fully the allusions :—

- (a) The Suabian sued, and now the Austrian reigns—
An Emperor tramples where an Emperor knelt.
- (b) When Athens' armies fell at Syracuse,
And fetter'd thousands bore the yoke of war,
Redemption rose up in the Attic Muse,
Her voice their only ransom from afar.

- (c) Peace to Torquato's injured shade ! 'twas his
In life and death to be the mark where Wrong
Aim'd with her poison'd arrows—but to miss.
7. (a) What does Byron say in *Childe Harold* of Dante, Sylla, the Coliseum ?
- (b) What reasons does he give for his early love of Venice ?

Second Paper.

Either,

1. Write a short note on the style used by Shakespeare in his Romances.

Or, Describe after Raleigh the character of Shakespeare's women. What difference do you find between them and Shakespeare's men ?

2. Show the connexion of *any two* of the following observations of Raleigh's argument, and illustrate them by examples :—

(a) All poetry, all art, observes certain conventions of form. These poems are sonnets. There is nothing else conventional about them, except their critics.

(b) Shakespeare moves in a larger scheme of things, where the sun rises on the evil and on the good.

(c) It is not true to say that in the greater tragedies of Shakespeare character is destiny.

3. Elucidate *any three* of the following :—

(a) Shakespeare's poetry has been cut into minute indigestible fragments, and like a wedding cake, not to eat, but to dream upon.

(b) There are many footprints around the cave of this mystery, none of them pointing in the outward direction.

(c) But for the accident of genius, tragedy in England might have continued as an imitative exercise, practised chiefly by argumentative philosophers.

(d) Falstaff bestrides the play like a Colossus, and the young gallants walk under his huge legs and peep about to find themselves honourable graves.

(e) Othello has lived all his life by faith, not by sight.

(f) He who runs may read, when he who stands and ponders is strangled by the grammatical intricacies.

Second Half.

Either.

4. Write a short note on Scott as a master of the picturesque, illustrating it by references to your text.

Or, Characterize after Scott the merits and defects of the Highlanders and the Lowlanders. To what extent did this affect the success of Montrose and Argyle ?

5. Explain *any two* of the following :—

(a) Were it in my option, I could no more consent to the halving of that dollar, than the woman in the Judgment of Solomon to the dismemberment of the child of her bowels.

(b) One of the Campbells replied, 'It is a far cry to Lochow.'

(c) I have sometimes thought of taking a turn either with Bethlem Gabor, or with the Janizaries.

(d) I am just now like the half-pike, or spontoon of Achilles, one end of which could wound, and the other cure.

Either,

6. Discuss and explain Southey's remark. 'Cowper is the best of English letter-writers.'

Or, What is Keat's conception of the poetic character? What do you think of Charlotte Bronte as a critic?

7. Explain *any two* of the following :—

(a) A man will make more by the figures of arithmetic than the figures of rhetoric, unless he can get into the trade wind, and then he may sail over Pactolean sands.

(b) When you have carried your point of discarding the ode, and my point of getting the sack, you will be exactly in the situation of Davy in the farce, who stipulates for more wages, less work, and the key of the ale-cellar.

(c) If there were such darling things as old Chaucer's rings, I would *up* behind you on the horse of brass and frisk off for Prester John's country.

(d) I will never *shrink* : and if you do, I can always answer you in the question of Guatimozin to his minister—each being on his own coals.

Third Paper.

First Half.

1. Express in your own words the underlying thought and purpose of the following passage :—

The old Adam within us is the Adam of the pre-social stages of human history the impulses of barbarism, the unrectified egotistic emotions of the dweller in cave and wilderness, which will from day to day burst loose and declare themselves, despite the long discipline to which mankind has been subjected through centuries of progressing civilization. Every time we give way to such impulses the old barbarian rises within us, and temporarily reasserts his power. Scratch the Russian, and you will find the Tartar just beneath—so runs the proverb : and in the great mass of men the morality of civilization is as yet hardly more than skin-deep. As with the ship in Ibsen's grim and terrible poem our modern society carries with it a corpse in the

cargo—the unbridled elemental passions, the brute instincts, the fierce anti-social tendencies transmitted to us by our far off ancestors from the days before society and even humanity began.

What new significance is in this way given to the oft-repeated phrase which describes the criminal classes as the failures of civilization ! They are the representatives of the savage left over in the midst of our more developed life, guided by the savage's predatory instincts, living in a state of natural enmity with those about them, preying upon their fellows, to whom they offer nothing in return, and thus remaining unintegrated into a great organization of mutual-dependent parts which constitutes society. The moral progress of man, as John Fiske epigrammatically put it, is the gradual process of 'throwing off the brute inheritance.' The law of morality thus becomes more emphatically than ever the law of the higher life ; sin is degeneration, atavism, reversion to the presocial or animal type ; and the ethical ideal of evolution in Tennyson's language, is to—

Moved upward, working out the best

And let the ape and tiger die.

2. Write in plain prose the story of 'The Destruction of Sennacherib' on the basis of the following poem :—

The Assyrian came down like the wolf on the fold,
And his cohorts were gleaming in purple and gold,
And the sheen of their spears was like stars on the sea,
When the blue wave rolls nightly on deep Galilee.

Like the leaves of the forest when Summer is green,
That host with their banners at sunset were seen ;
Like the leaves of the forest when Autumn hath blown,
That host on the morrow lay wither'd and strown.

For the Angel of Death spread his wings on the blast,
And breathed in the face of the foe as he pass'd ;
And the eyes of the sleepers wax'd deadly and chill,
And their hearts but once heaved, and for ever grew still.

And there lay the steed with his nostril all wide,
But through it there roll'd not the breath of his pride ;
And the foam of his gasping lay white on the turf,
And cold as the spray of the rock-beating surf.

And there lay the rider, distorted and pale,
With the dew on his brow, and the rust on his mail ;
And the tents were all silent, the banners alone,
The lances unlifted, the trumpet unblown.

And the widows of Ashur are loud in their wail,
And the idols are broke in the temple of Baal,
And the might of the Gentile, unsmeared by the sword,
Hath melted like snow in the glance of the Lord.

Second Half.

Write an Essay on *one* of the following subjects:—

- (a) The proper place and limits of Patriotism.
- (b) The chief contribution of Great Britain to Indian progress.
- (c) The dominant needs of modern India.
- (d) The value of Philosophy as a means of mental culture.
- (e) The virtue of open-mindedness.
- (f) The character and significance of recent developments in Bengali literature.

1919.

ENGLISH—PASS.

First Paper.

1. *Either*, What portions of Macbeth are supposed to be by another hand than Shakespeare's? Upon what grounds is this supposition based?

Or, Explain shortly the part played by the Weird Sisters in the action of the piece. In what respects do they resemble the witches of popular superstition?

2. Give the context and explain clearly the meaning of *four* of the following passages:—

(a) For those of old.

And the late dignities heap'd up to them,
We rest your hermits.

(b) Thou seest the heavens, as troubled with man's act,
Threaten his bloody stage; by the clock 'tis day,
And yet dark night strangles the travelling lamp.

(c) For 't must be done to-night,
And something from the palace; always thought,
That I require a clearness.

(d) The cloudy messenger turns me his back
And hums as who should say, 'You'll rue the time
That clogs me with this answer.'

(e) The mind I sway by and the heart I bear
Shall never sag with doubt nor shake with fear.

(f) Why should I play the Roman fool and die
On mine own sword? Whiles I see lives, the gashes
Do better upon them.

3. *Either*, Give a short sketch of the story of Lorenzo and Jessica, and show it is interwoven with the main action of the play.

Or, Illustrate by quotation or reference the chief points in the

character of Portia which are brought into prominence in the Trial Scene.

4. Write explanatory notes on *four* of the following passages and refer them to their context :—

(a) I fear he will prove the weeping philosopher when he grows old, being so full of unmannerly sadness in his youth.

(b) Well, if any man in Italy have a fairer table, which doth offer to swear upon a book, I shall have good fortune.

(c) Why, 'tis an office of discovery, love ;
And I should be obscured.

(d) You loved, I loved, for intermission ;
No more pertains to me, my lord, than you.

(e) For affection,
Mistress of passion, sways it to the mood
Of what it likes or loathes.

(f) Swear by your double self
And there's an oath of credit.

5. Explain fully the allusions :—

(a) Stop !—for thy tread is on an Empire's dust !
An earthquake's spoil is pulchred below !

(b) Yet one I would select from that proud throng,
Partly because they blend me with his line,
And partly because that I did his sire some wrong.

(c) While Waterloo with Cannae's carnage vies,
Morat and Marathon twin names shall stand.
They were true Glory's stainless victories.

(d) When Athens' armies fell at Syracuse.
And fettered thousands bore the yoke of war,
Redemption rose up in the Attic Muse.
Her voice their only reason from afar.

(e) The southern Scott, the minstrel who called forth,
A new creation with his magic line,
And like the Ariosto of the North,
Sang lady-love and war romance and knightly worth.

6. *Either*, State fully in your own words what Byron says about—

(a) the character of Napoleon ;

(b) the Coliseum.

Or. Illustrate Byron's feeling for external nature by his description of a thunderstorm among the mountains.

7. *Either*, Give a brief account of the last years of Milton's life, referring especially to the circumstances attending the composition of *Paradise Lost*.

Or, Describe the nature of *Paradise Lost*. Remark on (a) the power and qualities, (b) the chief defects of construction and diction of the poem.

8. Write notes on *three* of the following passages :—

- (a) All of me, then, shall die : let this appease
The doubt, since human reach no further knows.
- (b) Then purged with euphrasy and rue
The visual nerve, for he had much to see.
And from the well of life three drops instilled.
- (c) To teach thee that God attributes to place
No sanctity, if none be hither brought
By men who there frequent or therein dwell.
- (d) They gladly thither haste, and by a quire
Of squadroned Angels hear his carol sung.

9. Either, Quote lines showing the influence upon Milton of (a) the Scriptures, (b) the Classics.

Or, What modifications take place in Milton's imaginary physical structure of the Universe after the Tempter has succeeded in his enterprise ?

Second Paper

1. Either, Discuss the following statement made by the author of 'Discovery' :—

'Reward—as the world understands it—for work done or results obtained, is the last thought of a student of science.'

Or, Estimate the value of the contributions made by *any two* of the following men of science :—(a) Lord Kelvin (b) Lord Lister (c) F. Nansen, (d) Louis Pasteur, (e) Rontgen.

2. Explain with reference to the context *any two* of the following :—

(a) The talents which China possesses have been buried in the ground instead of being used to gain other talents.

(b) The Discovery of the intricate course of events is far more wonderful than achievement of any Arsene Lupin or Sherlock Holmes of fiction.

(c) Light is invisible until it strikes a material body ; and a maxim of conduct has likewise no practical meaning until it is reflected in human life.

(3) Either, Discuss :—Landor cannot be properly associated with any given epoch of English literature.....but stands alone by the character of his mind and by the tenour and circumstances of his life.

Or, State with reference to your text, what you consider the chief qualities of Landor as a prose-writer.

4. Explain fully giving the context, *any two* of the following:—

(a) Within an hour or less with how severe a brow would Minos say to me "Marcellus, is this thy writing?"

(b) Ambition is but Avarice on stilts and masked.

(c) The Romans were never quite civilized or quite humanized...
.....The wolf nurtured more than one couple.

5. State and discuss the alternatives proposed for properly dealing with 'the stubborn resistance' of the American colonies.

6. *Either*, Indicate briefly the scope of the various Parliamentary Acts of which the repeal is contemplated by the *first* of the three Conciliation Resolutions moved by Burke (called by him 'three consequential propositions'.)

Or, Write a full note on *any two* of the following:—

(a) Burke's conception of an empire. (b) Burke's remark on the Constitution, (c) his view about the *radical cause* of the dispute with America (d) his fundamental idea regarding 'all government'

7. *Either*, Summarize and comment on Burke's arguments regarding the questions of taxation and the raising of a revenue by taxation.

Or,

Illustrate Burke's remark that Slavery the American colonies can have anywhere.....They may have it from Spain, they may have it from Prussia. But freedom they can have from none but you.

8. Explain fully *any two* of the following:—

(a) Despotism itself is obliged to truck and huckster.

(b) Then, Sir, the sleeping trade laws revive from their trance.

(c) I am not even obliged to go to the rich treasury of the fertile framers of imaginary commonwealth.

(d) I cannot admit that proposition of a ransom by auction.

Third Paper.

1. Give in your own words the substance of *one* of the following passages. In what consists the special charm of the passage chosen by you?

(a) There is a certain even-handed *Justice in time*: and for what he takes away he gives us something in return. He robs us of elasticity of limb and spirit, and in its place he brings tranquillity and repose—the mild autumnal weather of the soul. He takes away Hope, but he gives us Memory. And the settled, unfluctuating atmosphere of Middle age is no bad exchange for the stormful emotions, the passionate crises and suspenses of the earlier day. The constitutional melancholy of the middle-aged man is a dim back-

ground on which the pale flowers of life are brought out in the tenderest relief. Youth is the time for action, middle age, for thought. In youth we hurriedly crop the herbage ; in middle age in a sheltered place, we chew the ruminative cud. In youth, red-handed, red-ankled with songs and shoutings we gather in the grapes ; in middle age, under our own fig-tree, or in quiet gossip with a friend, we drink the wine free of all turbid lees. Youth is a lyrical poet, middle age a quiet essayist, fond of recounting experiences and of appending a moral to every incident.

(b) From November 1810 George III ceased to reign. All the world knows the story of his malady, all history presents no sadder figure than that of the old man blind and deprived of reason, wandering through the rooms of his palace addressing imaginary Parliaments, reviewing fancied troops, holding ghostly Courts. He was not sightless ; he became utterly deaf. All light, all reason, all sound of human voice, all the pleasures of this world of God were taken from him.

What preacher need moralize on this story ; what words save the simplest are requisite to tell it ? It is too terrible for tears. The thought of such a misery smites me down in submission before the Ruler of kings and men, the Monarch Supreme over empires and republics, the inscrutable Dispenser of life, death, happiness, victory. 'O brothers', I said to those who heard me first in America ; 'O brothers' ! Speaking the same dear mother-tongue ; "O comrades ! enemies no more, let us take a mournful hand together as we stand by this royal corpse, and call a truce to battle ! Low he lies to whom the proudest used to kneel once, and who was cast lower than the poorest ; dead, whom millions prayed for in vain. Driven off his throne ; buffeted by rude hands ; with his children in revolt ; the darling of his old age killed before him untimely ; our tear hangs over her breathless lips and cries, Cordelia, Cordelia stay a little."

Vex not his ghost--oh ! let him pass—he hates him
That would upon the rack of this tough world
Stretch him out longer !

Hush ! Strife and quarrel, over the solemn grave ! Sound, trumpets, a mournful march ! Fall, dark curtain, upon his pageant, his pride, his grief, his awful tragedy !

2 Give in your own words the substance of *one* of the following, and elucidate its central idea :—

- (a) Long time a child, and still a child, when years
Had painted manhood on my cheek, was I,
For yet I lived like one not born to die ;
A thriftless prodigal of smiles and tears.
No hope, I needed, and I knew no fears,

But sleep, though sweet, is only sleep, and waking
 I waked to sleep no more, at once o'ertaking
 The vanguard of my age, with all arrears
 Of duty on my back. Nor child, nor man,
 Nor youth, nor sage, I find my hair is grey,
 For I have lost the race I never ran ;
 A rapid December blights my lagging May,
 And still I am a child, though I be old,
 Time is my debtor for my years untold,

- (b) God said, 'The spark shall grow—
 'Tis blest, it gathers, its flame shall lighten,
 Bless it and nurse it—let it brighten !
 'Tis scattered abroad, 'tis a Seed I sow.
 And the seed is a Soul, and the Soul is the Human ;
 And it lighteth the face with a sign and a flame.
 Not unto beasts have I given the same,
 But to man and to woman.

Mark ! mark !

The light shall scatter the dark ;
 Where murmur the Wind and the Rain,
 Where the jungle darkens the plain,
 And in street and lane.
 —So faint, so dim, so sad to seeing,
 Behold it burning ! only a spark !
 So faint as yet, and so dim to mark,
 In the tigress-eyes of the human being,
 Fan it, feed it, in love and duty.
 Track it, watch it in every place.
 Till it burns the bestial frame and face,
 To its own dim beauty.

Mark ! mark !

A spark that grows in the dark ;
 A spark that burns in the brain ;
 Spite of the Wind and the Rain,
 Spite of the Curse and the Stain,
 Over the Sea and the Plain
 And in street and lane.

3. Write an essay on *one* of the following subjects :—
 (a) A man's career depends on three things—training, character, opportunity. •
 (b) Journalism as a profession in modern India.
 (c) Nationality as a factor in literature.
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1920

ENGLISH—PASS.

First Paper.

1. Answer *one only* out of the following four :—

(a) Show how the three suitors of Portia reveal their character in their choice of the caskets.

(b) Can you defend the conversion of Shylock to Christianity? Give reasons for your answer.

(c) Compare and contrast King Henry with the Dauphin.

(d) Are Baldolph, Pistol and Nym sufficiently differentiated? Point out and illustrate the chief characteristics of each.

2. *Either*, Amplify and illustrate the following statement :—
‘When the day came to Milton to endow his country with an epic, he constructed it of two matters, of gold and of clay.’

Or, Describe the reconciliation between Adam and Eve.

3. Give the substance of *one* of the following poems :—(a) *Ode to Duty*, (b) *Ode to a Nightingale*, (c) *Ode to the West Wind*.

4. Explain *eight* of the following extracts, taking *two only* from each group :—

GROUP A.

(a) From the four corners of the earth they come,
To kiss this shrine, this mortal breathing saint :
The Hyrcanian deserts and the vasty wilds
Of wide Arabia are as thoroughfares now
For princes to come view fair Portia.

(b) O, that estates, degrees and offices
Were not derived corruptly, and that clear honour
Were purchased by the merit of the wearer ;
How many then should cover that stand bare !

(c) How many cowards, whose hearts are all as false
As stairs of sand, wear yet upon their chins
The beards of Hercules and frowning Mars,
Who, inward search'd have, livers white as milk.

GROUP B.

(d) When we have match'd our rackets to these balls,
We will, in France, by God's grace, play a set
Shall strike his father's crown into the hazard.

(e) He's in *Arthur's bosom*, if ever man went to Arthur's bosom.
He made a finer end and went away as it had been any *christom*
child ; a' parted even at the turning o' the tide.

- (f) The mayor and all his brethern in best sort...
 Go forth and fetch their *conquering Caesar* in :
 As, by a lower but loving likelihood,
 Were now *the general of our gracious empress*,
 As in good time he may, from Ireland coming,
Bringing rebellion broached on his sword,
 How many would the peaceful city quit,
 To welcome him !

GROUP C.

- (g) At that tasted fruit
 The sun, as from Thyestean banquet, turn'd
 His course intended.
 (h) Not that more glorious, when the angels met
 Jacob in Mahanaim, where he saw
 The field pavilion'd with his guardians bright.
 (i) Thus with ten wounds
 The river-dragon tam'd at length submits
 To let his sojourners depart.

GROUP D

- (j) Eternal Spirit of the chainless Mind !
 Brightest in dungeons, Liberty ! Thou art
 For there thy habitation is the heart—
 The heart which love of thee alone can bind.
 (k) The economy of Heaven is dark,
 And wisest clerks have miss'd the mark
 Why human buds, like this, should fall,
 More brief than fly ephemeral
 That has his day.
 (l) Our birth is but a sleep and a forgetting ;
 The soul that rises with us, our life's star,
 Hath had elsewhere its setting
 And cometh from afar.
 5. Write notes on the expressions italicised in *either (e) or (f)* of Group B.

Second Paper.

1. Comment on and give the context of the following :—
 (a) It was common for their statesmen to say that they ought to consult the genius of Philip the Second.
 (b) It would be curious to see the Guinea captain attempting at the same instant to publish his proclamation of liberty, and to advertise his sale of slaves.
 (c) The parties are the gamesters, but government keeps the table, and is sure to be the winner in the end.

(d) Coarse stones, if they are fractured, may be cemented again ; precious ones, never.

(e) The purest water runs from the hardest rock.

(f) Surely six tables for company are laid only at coronations.

(g) Everybody who wants them must buy them at Tonson's shop, and at Tonson's price.

(h) Whenever England increases her armaments and fortifications France does the same and vice versa.

(i) I came among you an out cast from those with whom I associated.

(j) If there is to be this voice rolling over chaos again, ushering in a millennium, the way of it lies through industrial teaching.

2. Indicate and discuss the use made by Burke of the examples of Ireland, Wales, Chester and Durham in their bearing on the solution of constitutional difficulties.

3. Write a brief sketch of the life and literary career of Burke in relation to the circumstances and problems of his time.

4. Give the gist and describe the situation *either* of the dialogue between Lady Lisle and Elizabeth Gaunt, or of the dialogue between the Maid of Orleans and Agnes Sorel. Write a note on the characters in the dialogue you select and Landor's treatment of them.

5. Write a short account of Landor's life and his contributions to English literature.

6. Sketch the career and character of Disraeli, and write an outline and critical review of his speech on Representation.

7. Review the circumstances and reproduce the substance of Bright's speech on slavery and Secession, and indicate the position Bright occupied in the life and thought of his time.

Third Paper.

1. (a) Express fully the sense or meaning of *one* of the following passages in your own words, sentence by sentence. (b) Express the purport of the whole passage in a single sentence :—

(i) What are the legitimate uses of the imagination ? Its first and noblest use is to enable us to bring sensibly to our sight the things which are recorded as belonging to our future state, or as invisibly surrounding us in this. It is given us, that we may imagine the cloud of witnesses in heaven and earth, and see, as if they were now present, the souls of the righteous waiting for us ; that we may conceive the great army of the inhabitants of heaven, and discover among them those whom we most desire to be with for ever ; that we may be able to vision forth the ministry of angels beside us, and see the chariots of fire on the mountains that gird us round. Its second and ordinary use is to empower us to traverse the scenes of all other

history, and force the facts to become again visible, so as to make upon us the same impression which they would have made if we had witnessed them ; and in the minor necessities of life, to enable us, out of any present good, to gather the utmost measure of enjoyment by investing it with happy associations, and, in any present evil, to lighten it, by summoning back the images of other hours ; and, also, to give to all mental truths some visible type in allegory, simile, or personification, which shall more deeply enforce them ; and, finally, when the mind is utterly outwearied, to refresh it with such innocent play as shall be most in harmony with the suggestive voices of natural things, permitting it to possess living companionship instead of silent beauty, and create for itself fairies in the grass, and naiads in the wave.

(ii) You remember that fancy of Aristotle's, of a man who had grown to maturity in some dark distance, and was brought on a sudden into the upper air to see the sun rise. What would his wonder be, his rapt astonishment at the sight we daily witness with indifference ! With the free open sense of a child, yet with the ripe faculty of a man, his whole heart would be kindled by that sight, he would discern it well to be godlike, his soul would fall down in worship before it. Now, just such a childlike greatness was in the primitive nations. The first Pagan Thinker among rude men, the first man that began to think, was precisely this child-man of Aristotle's. Nature was to this man, what to the Thinker and Prophet it forever is, *preter-natural*. This green flowery rock-built earth, the trees, the mountains, rivers, many-sounding seas ;—that great deep sea of azure that swims overhead : the winds sweeping through it ; the black cloud fashioning itself together, now pouring out fire, now hail and rain ; what is it ? Ay, what ? At bottom we do not yet know ; we can never know at all. It is not by our superior insight that we escape the difficulty ; it is by our superior levity, our inattention, our *want* of insight. It is by *not* thinking that we cease to wonder at it. We call that fire of the black thundercloud 'electricity', and lecture learnedly about it, and grind the like of it out of glass and silk ; but *what* is it ? What made it ? Whence comes it ? Whither goes it ? Science has done much for us ; but it is a poor science that would hide from us the great deep sacred infinitude of Nescience, whither we can never penetrate on which all science swims as a mere superficial film. This world, after all our science and sciences, is still a miracle ; wonderful, inscrutable, *magical* and more, to whosoever will *think* of it.

2. *Either*, (a) Express fully the sense of the following passage in your own words, bringing out clearly the meaning of the metaphors :—

A little learning is a dang'rous thing ;
 Drink deep, or taste not the Pierian spring,
 Fired at first sight with what the muse imparts,
 In fearless youth we tempt the heights of arts,
 While from the bounded level of our mind
 Short views we take, nor see the lengths behind ;
 But more advanced, behold with strange surprise
 New distant scenes of endless science rise !
 So pleased at first the tow'ring Alps we try
 Mount o'er the vales and seem to tread the sky,
 Th' eternal snows appear already past,
 And the first clouds and mountains seem the last ;
 But, those attained, we tremble to survey
 The growing labours of the lengthened way,
 Th' increasing prospect tires our wand'ring eyes,
 Hills peep o'er hills, and Alps on Alps arise !

Or (b) Express fully in your own words, and in the *third person*, the description of the sea contained or implied in the following poem :—

What hidest thou in thy treasure-caves and cells ?
 Thou hollow-sounding and mysterious main :—
 Pale glistening pearls, and rainbow-coloured shells,
 Bright things which gleam unrecked of, and in vain ;—
 Keep, keep thy riches, melancholy sea !

We ask not such from thee.

Yet more, the depths have more !—what wealth untold,
 Far down, and shining through their stillness lies !
 Thou hast the starry gems, the burning gold,
 Won from ten thousand royal Argosies !—
 Sweep o'er thy spoils, thou wild and wrathful main ;

Earth claims not *these* again.

Yet more, the depths have more !—thy waves have rolled
 Above the cities of a world gone by !
 Sand hath filled up the palaces of old,
 Seaweed o'ergrown the halls of revelry,—
 Dash o'er them, ocean ! in thy scornful play !

Man yields them to decay.

Yet more ! the billows and the depths have more !
 High hearts and brave are gathered to thy breast !
 They hear not now the booming waters roar,
 The battle-thunders will not break their rest :—
 Keep thy red gold and gems, thou stormy grave !

Give back the true and brave !

3. Write an Essay on any *one* of the following subjects :—

(a) The causes and effects of the Great War of 1914-18.



- (b) The effects of the modern novel.
- (c) The respective advantages of science and literature (including language) as branches of education.
- (d) Specialization in education.

1921

ENGLISH—PASS

First Paper.

1. *Either*, Give a brief summary of the plot of the *Comedy of Errors* to justify its title.

Or, Give the substance of the soliloquy beginning with 'Upon the King ! let us our lives, our souls' (iv, i), and show how it reveals the character of Henry V.

2. Explain, with reference to the context, *any three* of the following :—

- (a) Either our history shall with full mouth
Speak freely of our acts, or else our grave,
Like Turkish mute, shall have a tongueless mouth
Not worshipp'd with a waxen epitaph.
- (b) Not to-day, O Lord,
O, not to-day, think not upon the fault
My father made in compassing the crown !
I Richard's body have interred new.
.....More will I do.
- (c) I see a man here needs not live by shifts
When in the street he meets such golden gifts,—
- (d) What an intricate impeach is this !
I think you all have drunk of Circe's cup.

3. *Either*, Illustrate that *Comus* as a poem celebrates the victory of virtue.

Or, Give the substance of Wordsworth's *Ruth*, or the *Influence of Nature*, indicating the value of the alternative title.

4. Annotate either the *first two* or the *last two* extracts :—

- (a) And thou shalt be our star of Arcady
Or Tyrian Cynosure.
- (b) How charming is divine Philosophy !
Not harsh and crabbed, as dull fools suppose,
But musical as is Appollo's lute.
- (c) Perhaps the selfsame song that found a path
Through the sad heart of Ruth, when, sick for home,
She stood in tears amid the alien corn.

- (d) Sun-girt city ! thou hast been
Ocean's child, and then his queen ;
Now is come a darker day.

5. Give your own estimate of *only one* of the following poems :—

- (a) Wordsworth's Ode to Duty, (b) Shelley's Ode to the West Wind, (c) Coleridge's Youth and Age.

Second Paper

GROUP A.

1. *Either*, What, according to Burke, are the 'Six Capital Sources,' of the fierce spirit of liberty, found among the Americans ?

Or, Summarize Burke's arguments against Lord North's scheme of 'a ransom by auction',

GROUP B.

1. Give the substance of *any one* of the following :—

(a) Psalm XIX, dealing with the Glory of God in his Work and in his Law.

(b) Proverbs III, describing the blessing of Obedience, Chastisement, and Beneficence.

(c) The promise of Immanuel as given in Isaiah.

3. *Either*, Describe some of the shortcomings and drawbacks which, in modern ages, seem to threaten the academic pursuit of the higher forms of knowledge.

Or, Point out the utility of literary and historical studies.

4. *Either*, Give the substance of the remarks by which Newman shows that 'language is not an extra which can be dispensed with and provided to order according to the demand'.

Or, Discuss the following statement with special reference to Athens :—'If states are free, they are feeble ; if they are vigorous, they are high-handed.'

GROUP C.

Answer Questions 5 and 6 and either 7 or 8.

5. Explain *any two* of the following :—

(a) The superior power may offer peace with honour and with safety... But the concessions of the weak are the concessions of fear.

(b) The religion most prevalent in our northern colonies is a refinement on the principle of resistance ; it is the dissidence of dissent, and the Protestantism of the Protestant religion.

(c) An Englishman is the unfittest person on earth to argue another Englishman into slavery.

(d) Freedom, and not servitude, is the church of anarchy ; as religion, and not atheism, is the true remedy for superstition.

6. Annotate *any two* of the following :—

(a) Naked came I out of my mother's womb and naked shall

I return thither; the Lord gave, and the Lord hath taken away, blessed be the name of the lord.

(b) Purge me with hyssop and I shall be clean, wash me, and I shall be whiter than snow.

(c) Honour the Lord with thy substance, and with the first of all thine increase.

(d) In the day when the keepers of the house shall tremble, and the strong men shall bow themselves, and the grinders cease because they are few, and those that look out of the windows be darkened.

7. Annotate *any two* of the following :—

(a) The Scaligers, the Casaubons, were but the most conspicuous figures in a huge army of enthusiastic explorers, of which the humbler rank and file have been depicted for us with incomparable fidelity and pathos in Browning's *Grammarians' Funeral*.

(b) Grote sipping his punch, Carlye sitting down to his oatmeal, Gibbon pacing the acacia-walk, these are figures which deserve to live in the memory.

(c) Hadrian is, in a sense the Last of the Pagans, Marcus Aurelius, among the occupants of throne, fairly be called the First of the Saints.

(d) It implies an active and virile mental life, equipped against the fallacies of the market-place and the cave.

8. Explain *any two* of the following :—

(a) The ancient discipline, called the *Discipline Arcani* involved the same principle.

(b) Seafaring men see the tapestry of human life as it were, on the wrong side, and it tells no story.

(c) Romeo and Juliet are too good for the termination to which the plot leads.

(d) "Themistocle had a double drift, patriotic and traitorous, in the very act by which he secured to the Greeks the very place of Salamis.

Third Paper

1. Express fully the meaning of *any one* of the following passages :—

(a) *The Value of Literature.*

Literature is one of the instruments, and one of the most powerful instruments, for forming character, for giving us men and women armed with reason, braced by knowledge, clothed with steadfastness and courage, and inspired by that public spirit and public virtue, of which it has been well said that they are the brightest ornaments of the mind of man. Bacon is right, as he generally is, when he bids us read not to contradict and refute, not to believe and take for granted, nor to find talk and discourse,

but to weigh and to consider. In the times before us that promise or threaten deep political, economical and social controversy, what we need to do is to induce our people to weigh and consider. We want them to cultivate energy without impatience, activity without restlessness, inflexibility without ill humour. I am not going to preach to you any artificial stoicism. I am not going to preach to you any indifference to money, or to the pleasures of social intercourse, or to the esteem and good will of our neighbours, or to any other of the consolations and the necessities of life. But after all, the thing that matters most, both for happiness and for duty, is that we should habitually live with wise thoughts and right feelings. Literature held us more than other studies to this most blessed companionship of wise thoughts and right feelings, and so I have taken this opportunity of earnestly commending it to your interest and care.

(b) *Contrast between Human and Animal Minds.*

In forming our notions of human nature, we are apt to make a comparison between men and animals, the only creatures endowed with thought that fall under our senses. Certainly this comparison is favourable to mankind. On the one hand we see a creature whose thoughts are not limited by any narrow bounds, either of place or time; who carries his researches into the most distant regions of this globe, and beyond this globe to the planets and heavenly bodies; looks backward to consider the first origin, at least the history of the human race; casts his eyes forward to see the influence of his action upon posterity and the judgments which will be formed of this character a thousand years hence; a creature, which traces causes and effects to a great length and intricacy; improves upon his discoveries; corrects his mistakes; and makes his very errors profitable. On the other hand we are presented with a creature the very reverse of this! limited in its observations and reasonings to a few sensible objects which surround it; without curiosity, without foresight; blindly conducted by instinct, and attaining, in a short time, its utmost perfection, beyond which it is never able to advance a single step. What a wide difference is there between these creatures! And how exalted a notion must we entertain of the former, in comparison of the latter.

2. Express fully the meaning of *any one* of the following passages :—

- (a) *The Pleasures of hope*
Hope springs eternal in the human breast
Man never is, but always to be blest

The soul, uneasy and confined from home,
 Rests and expatiates in life to come.
 Lo, the poor Indian ! whose untutored mind
 Sees God in clouds or hears him in the wind :
 His soul, proud Science never taught to stray
 Far as the solar walk or milky way :
 Yet simple Nature to his hope has given,
 Behind the cloud-top hill, a humbler heaven :
 Some safer world in depth of woods embraced.
 Some happier island in the watery waste,
 Where slaves once more their native land behold,
 No fiends torment, no Christians thirst for gold.
 To be content his natural desire.
 He asks no angel's wing, no seraph's fire,
 But thinks, admitted to that equal sky,
 His faithful dog shall bear him company.

(b) *Life Compared to a River.*

The lapse of time and rivers is the same,
 Both speed their journey with a restless stream ;
 The silent pace with which they steal away,
 No wealth can bribe, no prayers persuade to stay :
 Alike irrevocable both, when past,
 And a wide ocean swallows both at last,
 Though each resemble each in every part,
 A difference strikes at length the musing heart,
 Streams never flow in vain ; where streams abound
 How laughs the land with various plenty crowned ;
 But time, that should enrich the nobler mind,
 Neglected, leaves a dreary waste behind.

3. Write an essay on any one of the following subjects :—

- (a) Technical education in Bengal.
- (b) Utility of the study of History.
- (c) The changes which steam power have wrought on the conditions of life of India.
- (d) The effects of the invention of Printing.
- (e) Shakespeare.
- (f) Your favourable novelist and why you like him.

1922

ENGLISH—PASS

First Paper

1. Does Othello take Desdemona's life in anger in a fit of jealousy, to avenge his wounded honour or as an act of disinterested judgment upon her ?

Give reasons for your answer.

2. Compare and contrast the two Antipholuses.

3. Give a summary of either, *Shelley's Ode to the West Wind*, or Wordsworth's *Ode to Duty*. What characteristics of the author are revealed in the poem ?

4. Explain *three* of the following extracts, taking one from each group :

GROUP A.

- (a) He hath achiev'd a maid
That paragon's description and wild fame
One that excels the quirks of blazoning pens,
And in the essential vesture of creation
Does tire the ingener.
- (b) They're close delations working from the heart
That passion cannot rule.

GROUP B.

- (a) 'Thyself' I call it, being strange to me,
That undividable, incorporate,
But better than thy dear self's better part.
Ah, do not tear away thyself from me !
For know, my love, as easy mayst thou fall
A drop of water in the breaking gulf,
And take unmingled thence that drop again,
Without addition or diminishing,
As take from me Thyself and not me too,
- (b) If by strong hand you offer to break it,
Now in this stirring passage of the day,
A vulgar comment will be made of it,
And that supposed by the common rout
Against your yet ungalled estimation
That may with foul intrusion enter in,
And dwell upon your grave when you are dead ;
For slander lives upon succession,
For ever hous'd where it gets possession.

GROUP C.

- (a) Of one deep bliss thine ear hath been bereft ;
Then, cleave, O, cleave to that which still is left—
For, high soul'd Maid what sorrow would it be
That Mountain floods should thunder as before,
And Ocean bellow from his rocky shore,
And neither awful Voice be heard by Thee !
- (b) Sun girt city : thou hast been
Ocean's child, and then his queen,
Now is come darker day,
And thou soon must be his prey,
If the power that raised thee here
Hallow so thy watery bier.

Second Paper.

A

1. Either, (a) State what you know of the *American Revenue Act*, and the *Navigation Act*, and sketch the history of the *Tea Duty* and its consequences.

Or, (b) Sketch the reasonings by which Burke refuted those who argued that 'the repeal of the Stamp Act was the beginning of all the troubles in America.'

2. Answer any any *one* of the following :—

(a) 'I look on the *imperial rights* of Great Britain and the *privileges* which the colonists ought to enjoy under these rights, to be just the most *reconcilable* things in the world.' Explain this, stating what Burke says about these 'rights and privileges,' and how they are to be reconciled.

(b) 'Nothing in the world can read, so awful and so instructive *a lesson* as the *conduct of the ministry, this business*. Explain the conduct here referred to and the lesson to be drawn from it.

(c) The *feelings of the Colonies* were formerly the feelings of the Great Britain. They were the feelings of *Mr. Hampden* when called upon for the *payment of twenty shillings*.' Annotate this passage.

(d) 'Here, Sir, is the *canonical book of the ministerial scripture* : the *general epistle to the Americans*.' Explain the phrases here used, and state what is referred to in the words 'Here is'.

B.

3. Either, (a) State what you know of the time and circumstances in which Isaiah composed his prophecies.

Or, (b) Show how Job justifies the ways of God to men.

4. Answer any *one* of the following :—

(a) Describe the vision of Eliphaz the Temanite, with its lesson.
 (b) Sketch *either*, (1) the terms in which Psalmi describes the blessings of the righteous man ; *or*, (2) those in which Psalm xxiii describes God as the shepherd of the righteous.

(c) Give the substance of the passage in which Isaiah states his own conception of God as compared with that of the nations (ch. xl).

(d) How does the author of Proverbs describe the glory and blessedness of having Wisdom (Ch. iii).

(e) Write notes on any *one* of the following passages :—

(i) Now, on a certain day when the sons of God came to stand before the Lord, Satan also was present among them.

(ii) 'The voice of one that crieth in the wilderness ; Prepare ye the way of the lord ; make straight in the desert a highway for (the paths of) our God.'

C.

5. *Either*, (a) Summarize the reasonings by which Mill tries to prove that 'diversity of opinion is advantageous' even when 'the received opinion is true,' and the counter opinion is false.

Or, (b) 'Doctrines fitted to make the *deepest impression* on the mind may remain in it as *dead beliefs*.' Explain the meaning of this, and give instances of such 'dead beliefs.'

D.

6. Answer any *one* of the following :—

(a) Swift said 'The two noblest things are sweetness and light.' Explain the meaning which Arnold attaches to these words. In whom, according to Arnold, have these qualities been most clearly exhibited ?

(b) 'The advocates of scientific education have been *excommunicated* by the *classical scholars* in their capacity of *Levites* in charge of the *ark* of culture, and *monopolists* of liberal education.' Explain this passage, giving the meanings of the terms used.

(c) 'The *riddle of the rocks* has been read by the *geologist* and the *palaontologist*, from *sub Cambrian depths* to the deposits thickening over the sea bottoms of to day.' Explain the terms here used.

(d) 'During the *drought* of the *middle ages* in Christianity, the *Arabian intellect* was active.' Explain this, stating what you know of the intellectual work of the Arabians during the middle ages.

7. Answer any *one* of the following :—

(a) The only life—that is for us, human being, which can be perfect, is the life that is *dedicated*. Explain in what this dedication consists, and what follows from it.

(b) 'Belief in the *Divine Rights of Kings* has passed away, but

even in this forgotten faith we have the spectacle of something that was *symbolical of a deeper truth*'. Explain this.

(c) 'The university is the *handmaid of the State* of which it is the *microcosm*'. Explain this. What has been the consequence of this theory in Germany?

Third Paper

1. Give in your own words the main points of *one* of the following passages, and prefix a title to your version :—

(a) What is that which first strikes us, and strikes us at once, in a man of education, and which among educated men, so instantly distinguishes the man of superior mind that, as was observed, with eminent propriety, of the late Edmund Burke, 'We cannot stand under the same archway during a shower of rain, without finding him out'? Not the weight or novelty of his remarks; not any unusual interest of facts communicated by him. The difference will be impressed and felt though the conversation should be confined to the state of the weather, or of the payment. Still less will it arise from any peculiarity in his words and phrases. There remains but one other point of distinction possible; and this is the true cause of the impression made on us. It is the unpremeditated and evidently habitual arrangement of his words, grounded on the habit of foreseeing, in each integral part, or more plainly, in every sentence the whole that he then intends to communicate. However irregular and desultory his talk, there is method in the fragments.

(b) In every species of creatures, those who have been least time in the world appear best pleased with their condition; for, besides that to a newcomer, the world hath a freshness in it that strikes the senses after a most agreeable manner being itself, unattended with any great variety of enjoyments, excites a sensation of pleasure. But as age advanced, everything seems to wither, the senses are disgusted with their old entertainments, and existence turns flat and insipid. We may see this exemplified in mankind; the child, let him be free from pain and gratified in his change of toys, is diverted with the smallest trifles. Nothing disturbs the mirth of the boy but a little punishment of confinement. The youth must have more violent measures to employ his time; the man loves the hurry of an active life devoted to the pursuits of wealth or ambition; and lastly, old age, having lost its capacity for these avocations, becomes its own insupportable burden. This variety may in part be accounted for, by the vivacity and decay of the faculties, but, I believe, is chiefly owing to this that the longer we have been in possession of being, the less sensible is the gust we have of it.

2. Answer any *one* of the following :—

(a) *First*, express the sense or meaning of the following lines

fully in your own words ; and, *secondly* state the substance, purport, or lesson of the whole passage, in a single sentence :—

Vain, very vain, my weary search to find
That bliss which only centres in the mind,
Why have I strayed from pleasure and repose ;
To seek good each government bestows ?
In every government, though terrors reign,
Though tyrant kings or tyrant laws restrain.
How small, of all that human hearts endure,
That part which laws or kings can cause or cure ;
Still to ourselves in every place consigned,
Our own felicity we make or find :
With secret course which no loud storms annoy,
Glides the smooth current of domestic joy.
The lifted axe, the agonizing wheel,
Luke's iron crown, and Lamien's bed of steel.
To men remote from power but rarely known,
Leave reason, faith, and conscience all our own.

(b) Tell over again, in your own words, the story told or implied in the following stanzas :—

The Soldier's dream

Our bugles sang truce—for the night cloud had lowered
And the sentinal stars set their watch in the sky ;
And thousands had sunk on the ground overpowered,
The weary to sleep, and the wounded to die.
When reposing that night on my pallet of straw,
By the wolf-scaring faggot that guarded the slain ;
At the dead of the night a sweet vision I saw,
And thrice ere the morning I dreamt it again.
Methought from the battle-field's dreadful array,
Far, far I had roamed on a desolute track :
'Twas Autumn—and sunshine arose on the way
To the home of my fathers, that welcomed me back,
I flew to the pleasant fields traversed so oft
In life's morning march, when my bosom was young,
I heard my own mountain goats bleating aloft,
And new the sweet strain that the corn-reapers sung,
Then pledge we the wine cup, and fondly I swore,
From my home and my weeping friends never to part.
My little one kissed me a thousand times o'er,
And my wife sobbed aloud in her fullness of heart.
Stay, stay with us,—rest, thou art weary and worn ;
And fain was their war-broken soldier to stay :—
But sorrow returned with the dawning of morn,
And the voice in my dreaming ear melted away.

3. Write an essay on any *one* of the following subjects :—

- (a) The most heroic character in fiction with which you are acquainted.
- (b) Your favourite poet, and the reasons why you prefer him.
- (c) What is a great man, and what are the uses of great men ?
- (d) The choice of a profession.

1923

ENGLISH—PASS

First Paper

1. *Either*, 'In Shakespeare's comedies mistakes and crosspurposes are used as means to maintain suspense and prolong the interest in the story'.

Illustrate the statement.

Or, Describe the home life in the Elizabethan age as presented in the *Comedy of Errors*.

2. *Either*, Show that if Othello is simple as a hero, Desdemona is simple as a saint, giving references to the play.

Or, Discuss—'Iago is the absolute infidel.'

3. Amplify the leading thought of *one* of the following to show the poet's chief characteristics :—

- (a) The Inner Vision.
- (b) Realm of Fancy.
- (c) Wordsworth's sonnet On Milton.

4. Give, with reference to the context, the sense of *three* of the following extracts, *one* being taken from each group :—

GROUP A.

- (a) I to the world am like a drop of water
That in the ocean seeks another drop
Who falling there to find his fellow forth
Unseen, inquisitive, confounds himself.
- (b) Though now this grained face of mine be hid
In sap-consuming winter's drizzled snow,
And all the conduits of my blood froze up,
Yet hath my might of life some memory,
My wasting lamp some fading glimmer left,
My dull deaf ears a little use to hear.

GROUP B.

- (a) No ; to be once in doubt
Is once to be resolv'd ; exchange me for a goat
When I shall turn the business of my soul
To such exsufficate and blown surmises,
Matching thy inference.
- (b) But once put out thy light
Thou cunning'st pattern of excelling nature,
I know not where is that Promethean heat
That can thy light relume.

GROUP C.

- (a) And when I feel, fair creature of an hour !
That I shall never look upon thee more,
Never have relish in thy fairy power
Of unreflecting love—then on the shore
Of the wide world I stand alone, and think
Till love and fame to nothingness do sink.
- (b) Sweet views which in our world above
Can never well be seen,
Were imaged by the water's love
Of that fair forest green ;
And all was interfused beneath
With an Elysian glow.

Second Paper

1. *Either*, Show the connexion of the following with Burke's line of argument :—'Tyranny is a poor provider. It knows neither how to accumulate, nor how to extract.'

Or, Reproduce in your own words Burke's appreciation of Townshend.

2. *Either*, Point out how the judicial murder of Stephen, and the persecution of which it was the prelude, helped the spread of Christianity.

Or, Give some idea of the teaching sought to be conveyed in the Epistle of St James.

3. *Either*, Reproduce Lord Haldane's remarks on the lessons Germany has taught of the value of organization, and the part played in it by the German Universities.

Or, What, according to Professor Clark, are the considerations which reduce the attractiveness of this Socialistic ideal ?

4. Explain three passages from the following taking one from each group :—

GROUP A.

(a) Your ministerial directors blustered like tragic tyrants here, and then went mumping with a sore leg in America, canting and whinning and complaining of faction.

(b) Interested timidity disgraces as much in the Cabinet, as personal timidity does in the field.

(c) Nobody will be argued into slavery.

GROUP B.

(d) *Either*, Now after many years I come to bring alms to my nation, and offerings.

Or, Now after many years I came to bring alms to my nation and offering and vows (Douay Version.)

(e) By faith Abraham when he was tried, offered Isaac : and he that had received the promises offered up his only begotten son.

(f) *Either*, Therefore if thine enemy be hungry, feed him : if he be thirsty, give him drink : For in so doing thou shalt heap coal of fire on his head.

Or, But if thy enemy be hungry give him to eat : If he be thirsty, give him to drink. For doing this, thou shalt heap coals of fire upon his head. (Douay Version).

GROUP C.

(g) The enemies of religious freedom, when hard pressed, occasionally accept this consequence, and say, with Dr. Johnson, that the persecutors of Christianity were in the right.

(h) Achan takes the accursed thing which had been devoted to Juhvch.

(i) We all know that Catherine the second of Russia was a German Princess. But I do not suppose there is anybody who has read a page of history who will deny that Catherine is one of the greatest of Russians.

Third Paper

1. Express fully the meaning of any one of the following passages :—

Poetry and Science

(a) We think that, as civilization advances, poetry almost necessarily declines. Therefore, though we fervently admire those great works of imagination which have appeared in dark ages, we do not admire them the more because they have appeared in dark ages. On the contrary, we hold that the most wonderful and splendid proof of genius is a great poem produced in a civilized

age. We cannot understand why those who believe in that most orthodox article of literary faith, that the earliest poets are generally the best, should wonder at the rule as if it were the exception. Surely the uniformity of the phenomenon indicates a corresponding uniformity in the cause.

The fact is, that common observers reason from the progress of the experimental sciences to that of imaginative arts. The improvement of the former is gradual and slow. Ages are spent in collecting material, ages more in separating and combining them. Even when a system has been formed, there is still something to add, to alter or reject. Every generation enjoys the use of a vast hoard bequeathed to it by antiquity, and transmits the hoard, augmented by fresh acquisitions, to future ages. In these pursuits, therefore, the first speculators lie under the great disadvantages and, even when they fail, are entitled to praise. Their pupils, with far inferior intellectual powers, speedily surpass them in actual attainments.—Macaulay.

On Travel.

(b) There is hardly anything that shows the short-sightedness or capriciousness of the imagination more than travelling does. With change of place we change our ideas; nay, our opinions and feelings. We can by an effort indeed transport ourselves to old and long forgotten scenes, and then the picture of the mind receives again; but we forget those that we have just left. It seems that we can think but of one place at a time. The canvas of the fancy is but of a certain extent, and if we paint one set of objects upon it, they immediately efface every other. We cannot enlarge our conceptions, we only shift our point of view. The landscape bares its bosom to the enraptured eye, we take our fill of it, and seem as if we could form no other image of beauty or grandeur. We pass on, and think no more of it; the horizon that shuts it from our sight also blots it from our memory like a dream. All that part of the man that we do not see before us is blank. The world in our conceit of it is not much bigger than a nutshell. The mind can form no larger idea of space than the eye can take in at a single glance. The rest is a name written in a map, a calculation of arithmetic.—Hazlitt.

2. Paraphrase one of the following poems, bringing out clearly the central idea:—

(a) *The Influence of time on Grief.*

O Time! who know'st a lenient hand to lay
Softest sorrow's wound, and slowly thence,
Lulling to sad repose the weary sense,
The faint pang stealest, unperceived, away;
On thee I rest my only hope at last,

And think when thou hast dried the bitter tear
 That flows in vain sorrow past,
 And meet life's peaceful evening with a smile ;
 As some lone bird at day's departing hour,
 Sings in the sunbeam, of the transient shower
 Forgetful, though its wings are wet the while
 Yet, ah ! how much must that poor heart endure
 Which hopes from thee, and thee alone, a cure.

, —*Bowels.*

(b)

The Hindu Ascetic.

Here as I sit by the Jumna bank,
 Watching the flow of the sacred stream,
 Pass me the legions, rank on rank,
 And the cannon roar and the bayonets gleam.
 It is a god or a king that comes ?
 Both are evil and both are strong ;
 With women and worshipping, dancing and drums,
 Carry your gods and your kings alone.
 Fanciful shapes of a plastic earth,
 These are the visions that vary the eye ;
 These I may 'scape by a luckier birth,
 Musing and fasting and hoping to die.
 When shall these phantoms flicker away ?
 Like the smoke of the guns on the wind-swept hill,
 Like the sounds and colours of yesterday :
 And the soul have rest, and the air be still.

—*Sir Alfred Lyall.*

3. Write an essay on any *one* of the following subjects :—

- (a) 'Life is action and not contemplation'.—*Goethe.*
- (b) Citizenship—its rights and responsibilities.
- (c) The fairy tales of science.—*Tennyson.*
- (d) Modern Bengali poets.
- (e) Ancient India.
- (f) Your favourite author, Indian or English.

1924

ENGLISH—PASS

• First Paper

1. Trace the development of jealousy in Othello's mind, showing Iago's connexion with it.
2. Give a summary of the riddling errors that justify the title of the play of *Comedy of Errors*.

3. Give *either* a character analysis of Adriana, *or* your own estimate of the character of Emilia.

4. Give the substance of *one* of the following poems, pointing out some of its beauties :—

(a) Education of Nature.

(b) The Recollection.

(c) Ode to a Nightingale.

5. Explain, with reference to the context any *three* of the following passages :—

(a) My advocacy is not now in tune ;
My lord is not my lord ; nor should I know him
Where he in favour as in hamour altered.
So help me every spirit sanctified,
As I have spoken for you all my best.
And stood within the blank of his displeasure
For my free speech.

(b) But O vain boast !
Who can control his fate ? 'Tis not so now—
Be not afraid, though you do see me weaponed ;
Here is my journey's end here is my butt
And very sea-mark of my utmost sail.

(c) Ah, but I think him better than I say,
And yet would herein others' eyes were worse.
Far from her nest the lapwing cries away.

(d) Serene will be our days and bright
And happy will our nature be
When love is an unerring light
And joy its own security.

(e) Great God ! I'd rather be
A pagan suckled in a creed out worn
So might I, standing on this pleasant lea,
Have glimpses that would make me less forlorn.

Second Paper

1. *Either*, How does Carlyle show that the circumstances under which the *Robbers* was composed can be traced in all its parts ?

Or, Give an appreciation of Schiller's *William Tell*.

2. Give a general idea of the teachings inculcated by St. Paul.

3. *Either*, when does Mill condemn people who refuse to discuss the truth of opinions which have been accepted as certain by the world at large ?

Or, Show that 'the conception of the Govt. as an impartial authority to try the merits of the case, the exclusive reliance on evidence and testimony.....the 'execution of the Court's decision by a public force' are the results of a slow historical process.'

4. Explain *three* passages from the following taking *one only* from each group :—

GROUP A.

(a) Look at the biography of authors ! Except the Newgate Calender, it is the most sickening chapter in the history of man.

(b) Charles himself had lost my favour perhaps for no other reason than because I had become his senior ; and from the opposite cause, Posa had occupied his place.

(c) This law of *ostracism* is dangerous in science as it was of old in politics. Let us not forget that many things are true which cannot be demonstrated by the rules of *Watts' Logic* ; that many truths are valuable, for which no price is given in Paternoster Row, and no preferment offered at St. Stephen's.

GROUP B.

(d) *Either*, David found favour before God and desired to find a tabernacle for the God of Jacob. But Solomon built him a house.

Or, David found grace before God, and desired to find a tabernacle for the God of Jacob. But Solomon built him a house.

(e) *Either*, Elias was a man subject to like passions as we are, and he prayed earnestly that it might not rain ; and it rained not on the earth by the space of three years and six months.

Or, Elias was a man possible like unto us and with prayer he prayed that it might not rain upon the earth, and it rained not for three years and six months.

GROUP C.

(f) The propounder of a new truth according to this doctrine, should stand, as it stood, in the legislation of the Loerius, the proposer of a new law.

(g) The spirit needs but little surrounding for its development, and that little it finds as readily in the solitude of the Braid Hills as on the banks of the Isis or the Cam, in the walks round Arthur's Seat as in the gardens of Magdalen or of Trinity.

(h) He was one of those men who appear with a single stamp of their foot to leave their impress upon history, as the footprint which startled Crusoe remains eternal on the field of romance.

Third Paper.

1. Take *one* of the following extracts, and in a short paragraph describe its theme. Having done this, express in your own language the main ideas in the order in which they come in the passage :—

(a) A gentleman's first characteristic is that fineness of structure in the body which renders it capable of the most delicate sensation and of structure in the mind which renders it capable of the most

delicate sympathies—one may say simple 'fineness of nature'. This is, of course, compatible with heroic bodily strength and able without such delicacy.

And though rightness of moral conduct is ultimately, the great purifier of race, the sign of nobleness is not in rightness of moral conduct, but in sensitiveness. When the make of the creature is fire, its temptations are strong, as well as its perception; it is liable to all kinds of impressions from without in their most violent form; liable therefore to be abused and hurt by all kinds of rough things which would do a coarser creature a little harm, and thus to fall into frightful wrong if its fate will have it so.

Hence it will follow that one of the probable signs of high breeding in men generally, will be their kindness and mercifulness, these always indicating more or less fineness of make in the mind, and miserliness and cruelty in the contrary. But a thousand things may prevent his kindness from displaying or continuing itself; the mind of the man may be warped so as to bear mainly on his own interests; and then all his sensibilities will take the form of pride, or fastidiousness, or revengefulness; and other wicked, but not ungentlemanly tempers: or further, they may run into utter sensuality and covetousness if he is bent on pleasure accompanied with quite infinite cruelty when the pride is wounded or the passions thwarted.

(b) Among all the qualities which go to constitute the highest military excellence, either as a general or as a soldier none was wanting in the character of Alexander. Together with his own chivalrous courage—sometimes, indeed, both excessive and unseasonable so as to be imputed to him—we trace in all his operations the most careful dispositions taken-before-hand, vigilant precaution in guarding against possible reverse, and abundant resource in adapting himself to new contingencies. His achievements are the earliest recorded evidence of scientific military organization on a large scale, and of its overwhelming effects. Alexander overawes the imagination more than any other personage of antiquity by the matchless development of all that constitutes effective force—as an individual warrior, and as an organizer and leader of armed masses. But all his great qualities were for use only against enemies; in which category, indeed, were numbered all mankind, known and unknown, except those who chose to submit to him. In his Indian campaigns, amidst tribes of utter strangers, we perceive that not only those who stand on their defence, but also those who abandon their property and flee to the mountains, are alike, pursued and slaughtered.

Apart from the transcendent merits of Alexander as soldier and a general, some authors give him credit for grand and beneficent views on the subject of imperial government, and for intentions

highly favourable to the improvement of mankind. I see no ground for adopting this opinion. As far as we can venture to anticipate what would have been Alexander's future, we see nothing in prospect except years of ever repeated aggression and conquest, not to be concluded until he had traversed and subjugated all the inhabited globe.

2. Take one of the following poems, and in a short paragraph describe its theme. Having done this, express in your own language the main idea in the order in which they occur in the passage :—

(a)

Shakespeare.

Other abide our question. Thou art free,
We ask and ask ; Thou smilest and art still,
Outtopping knowledge. For the loftiest hill
That to the stars uncrowns his majesty
Planting his steadfast footsteps in the sea,
Making the heavens his dwelling place,
Spares but the cloudly border of his base
To the foil'd searching of morality :
And thou, who didst the stars and sunbeams know,
Self-school'd self-scann'd, self honour'd self-secure,
Didst walk on earth unguess'd at, better so
All pains the immortal spirit must endure,
All weakness that impairs, all griefs that bow,
Find their solve voice in that victorious brow.

—*Matthew Arnold.*

(b)

Say not the Struggle Naught availeth.

Say not the struggle naught availeth,
The labour and the wounds are vain,
The enemy faints not, nor faileth,
And as things have been they remain.
If hopes were dupes, fears may be liars ;
It may be, in you smoke conceal'd.
'Your comrades chase e'en now the fliers ;
And, but for you possess the field.
For while the tired waves, vainly breaking,
Seem here no painful inch to gain,
Far back, through creeks and inlets making,
Comes silent, flooding in, the main.
And not by eastern windows only,
When day-light comes in the light ;
In front the sun climbs slow how slowly !
But westward, look, the land is bright !

—*Arthur Hugh Clough.*

3. Write an Essay on *one* of the following subjects :—
- (a) The parliaments of modern India.
 - (b) Industrialism in modern India life.
 - (c) Bengal's contribution to modern English literature.
 - (d) The freedom of the Press.
 - (e) Any historical novel you have read.
 - (f) The freedom of Universities.
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1925.

ENGLISH—PASS

First Paper.

1. *Either*, Show how the farcical elements in the *Comedy of Errors* have been improved by Shakespeare's genius.

Or, Discuss with reference to the text Desdemona's estimate of Othello as indicated in the utterance :

'My noble Moor

Is true of mind, and made of no such baseness

As jealous creatures are'.

2. *Either*, Is the character of Iago unnatural ?

Or, Give an analysis of Adriana's character.

3. *Either*, Write a critical note on the 'love poems' in Palgrave.

Or, Give the substance of Shelley's 'Recollection.'

4. Explain, with reference to the context, any *three* of the following :—

(a) Though others have the arm, show us the sleeve ;

We in your motion turn and you may move us.

(b) Be it my wrong, you are from me exempt.

(c) But once put out thy light

Thou cunning'st pattern of excelling nature,

I know not where is that Promethean heat

That can thy light relume.

(d) It is a judgment main'd and most imperfect

That will confess perfection so could error

Against all rules of nature ; and must be driven

To find out practices of cunning hell.

Why this should be.

(e) And now, alas ! the poor spirit is

Imprisoned for some fault of his

In a body like a grave—

From you he only dares to crave

For his service and his sorrow,

A smile to-day, a song to-morrow.

- (f) So once it would have been,—'tis so no more ;
 I have submitted to a new control :
 A power is gone, which nothing can restore,
 A deep distress hath humanized my soul.

Second Paper.

1. Give some idea of St. Paul's trial and defence.
2. *Either*, What according to Lord Haldane, are the functions of the University ?

Or, Give the substance of Bryce's remarks on the 'two gifts of supereminent value conferred on the graduate by his Alma Mater.

3. Explain *two* passages from the following, taking *one* only from each group :—

GROUP 1.

(a) Can any man forbid water, that these should be baptized, which have received the Holy Ghost as well as we ?

(b) *Either*, Through faith he kept the passover, and the sprinkling of blood, lest he that destroyed the first-born should touch them.

Or, By faith he celebrated the pasch, and the shedding of blood : that he, who destroyed the first-born, might not touch them.

GROUP II.

(c) The fight with the purse is not the ideal substitute for the fight with the person.

(d) The study of history brings us to the same conclusion as that of literature : that man does not, and cannot, live by bread alone

4. *Either*, What are the characteristics of Schiller's historical works ? What histories did he write ? Can you suggest why he gave up this kind of work ?

Or, 'Schiller gives a fine example of German character. Illustrate this statement.

5. Explain *one* of the following passages :—

(a) Franz von Moor, the villain of the piece, is an amplified copy of Iago and Richard ; but the copy is distorted as well as amplified.

(b) Rousseau never should have lived in the Val de Mont-moreni ; it had been good for Warburton that Hurd had not existed ; for Johnson never to have known Boswell of Davies.

6. *Either*, The Norse Religion, a rude but earnest, sternly impressive consecration of valour, sufficed for these old valiant Norsemen.' Show how this consecration of valour was embodied in their religion.

Or, Disorder is dissolution. death...while man is man. Some Cromwell or Napoleon is the necessary finish or a Sansculottism Give Carlyle's ideas on this subject.

7. Explain and comment on *one* of the following :—

(a) These babbling *arocats* up at Paris ! all talk and no work we shall have put our *Petit Corporal* there !

(b) The Eighteenth was a Sceptical Century ; in which little word there is a whole Pandor's box of miseries.

Third Paper

1. Give in your own words the substance of *one* of the following passages :—

(a) Blessed with boundless energy, the mountain-climbers revel in its exercise. It is only on the mountain-side, breathing its pure air, buffeting against its storms, testing their nerve, exercising their intelligence and judgment feeling their manhood, looking on Nature face to face and with open heart and mind that they are truly happy. For these men days on the mountain are truly really lively. All their faculties become tuned up and their whole being becomes more sensitive. Thus they detect appeals from Nature they had never heard before and see beauties which are revealed only to those who win them. To those who have struggled with them, the mountains reveal beauties they will not disclose to those who make no effort. And it is because they have much to give and give it lavishly to those who will be suggestive with them, that men love the mountains and go back to them again and again.

(b) The family, like the home in which they live, need to be kept in repair, lest some little rift in the walls should appear and let in the wind and the ruin. The happiness of a family depends very much on attention to little things. Order, comfort, regularity, cheerfulness, good taste, pleasant conversation—these are the ornaments of daily life. There must be light in the dwelling and brightness and pure spirits are cheerful smiles. Home is not usually the place or on our tents place to which we return from our labour : where parents and children meet together and pass a cheerful joyous hour.

2. Give a prose rendering of *one* of the following passages bringing out the central idea in each case :—

(a) Sweet is the breath of morn, her rising sweet,
With charm of earliest birds ; pleasant the Sun
When first on this delightful land he spreads
His orient beams, on herb, tree, fruit, and flower
Glistening with dew ; fragrant the fertile earth

After soft showers ; and sweet the coming on
 Of grateful evening mild ; then silent Night
 With this her solemn Bird and this fair Moon
 And this gems of Heaven her starry train
 But neither breath of Morn when she ascends
 With charm of earliest birds, nor rising Sun
 On this delightful land, nor herb, fruit, flower,
 Glistening with dew, nor fragrance after shower
 Nor grateful Evening mild, nor silent Night
 With this her solemn Bird, nor walk by Moon
 Or glistening starlight without thee is sweet.

- (b) Oh, talk not to me of a name great in story,
 The days of our youth are the days of our glory !
 And the myrtle and ivy of sweet two and twenty
 Are worth all your laurels, tho' ever so plenty.
 What are garlands and crowns to the brow that is wrinkled ?
 'This but as a dead flower within May dew besprinkled—
 Then away with all such from the head that is hoary
 What care I for the wreaths that can only give glory
 O Fame ! If I e'er took delight in thy praises,
 'Twas less for the sake of thy high-sounding phrases,
 Than to see the bright eyes of the dear one discover
 She thought that I was not unworthy to love her.

3. Write an essay on *one* of the following subjects :—

- (a) The best form of recreation.
- (b) The peculiarities in character and customs of the people in any District of Bengal with which you are familiar.
- (c) The value of the study of History.
- (d) Ideals of character in ancient and modern India.
- (e) The fascination of Travel.

1926

ENGLISH—PASS

• First Paper

1. *Either*, (a) Compare and contrast *either* (i) Wordsworth's poem *To the Skylark* and Shelley's *To a Skylark*, or (ii) any *two* other poems addressed to birds. Illustrate by quotations.

Or, (b) In what ways are *Kubla Khan* and *Rosabelle* characteristic of the genius of their authors ?

2. Explain, with reference to the context—

Either, (a) Not in entire forgetfulness

And not in utter nakedness,
But trailing clouds of glory do we come
From God who is our home.

Or, (b) Then felt I like some watcher of the skies
When a new planet swims into his ken ;
Or like stout Cortez, when with eagle eyes
He stared at the Pacific—and all his men
Look'd at each other with a mild surmise—
Silent, upon a peak in Darien.

3. *Either, (a)* Discuss with reference to *Othello* the saying that 'Shakespeare has no heroes : he has only heroines.' In what sense can *Othello* be called the hero of the play ?

Or, (b) Compare Iago with any other villain in one of Shakespeare's plays.

4. *Either*, What is your estimate of Shylock's character ?

Or, Explain what is meant by the remark that 'Shylock is more sinned against than sinning.'

5. Explain with reference to the context any *two* of the following passages :—

(a) And twenty of these puny lies I'll tell,
That men shall swear I have discontinued school
Above twelvemonths. I have within my mind
A thousand raw tricks of these bragging Jacks.
Which I will practice.

(b) Virtue a fig ! 'tis in ourselves that we are thus or thus...
the balance of our lives had not one scale of reason to poise
another of sensuality, the blood and baseness of our natures would
conduct us to most preposterous conclusions.

(c) It is the cause, it is the cause, my soul.—
Let me not name it to you, you chaste stars !—
It is the cause.—Yet I will not shed her blood ;
Nor scar that whiter skin of hers than snow.
And smooth as monumental alabaster.

N. B.—A mere paraphrase will not be accepted as an explanation.

Second Paper

1. Explain any *two* of the following passages :—

(a) He has a greater esteem for Aldus and Elzevir than for Virgil and Horace, If you talk to him of Herodotus, he breaks out into a panegyric of Harry Stephens.

(b) What should we say in our time to the Euphuism of the

age of Elizabeth when style was made a riddle, and the Court talked in conundrums ?

(c) We find it (the *lex tadionis*) in the recently discovered code of King Hammurabi, which is older than the book of the Covenant by perhaps 1300 years.

2. Answer any *two* of the following questions :—

(a) How according to Ruskin, must we read books if we mean to arrive at their full sense and profit by them ? What does Tooreau say on this subject ?

(b) What view does Sir Philip Sidney give of the scope of the Poet's work as compared with that of other forms of literature ?

(c) Frederick Harrison says : The choice of books is really the choice of our education ; but books (by themselves) 'are no more education than laws are virtue.' Explain and comment on this.

(d) What does Carlyle understand by a 'hero,' and in what sense may a man of letters be a 'hero' ?

3. Answer any *two* of the following :—

(a) Show the principal advantages and the principal dangers incident to the State control of universities.

(b) *Either*, (i) 'We constantly hear men who are ready to spend money on the so-called practical branches of study while they seek to eliminate altogether the so called "humanities". Explain the meaning of this, and discuss the subject briefly.

Or, (ii) Then intellectual stamp which a university ought to leave on those whom it teaches,' and whether that stamp is 'the supreme and ultimate test of its work,' What does Mr. Asquith say on these subjects ? Give your own opinion on them.

(c) There is juncture in the affairs of men when what is wanted is a man—not treasures, not fleets, nor legions, but a man. How does Rosebery illustrate and enforce this principle ?

(d) J. B. Clark gives certain 'arguments' seeming to 'make an effective case for socialism.' State these 'arguments' and give your estimate of them briefly.

4. Answer any *two* of the following :—

(a) Give the substance of St. Paul's address to the Athenians with explanations.

(b) Sketch the account of his own conversion given by St. Paul in his trial before Agrippa, and explain the result of the trial.

(c) 'And when all things shall be subdued unto Him (the Son) then shall the Son Himself be subject to Him that put all things under Him, that God may be all in all. Explain and comment on this.

(d) Give some account of the author and purposes of the book of Acts.

Third Paper

1. Give in your own words the substance of *one* of the following passages :—

(a) There are many who understand Latin and Greek, and yet are ignorant of their mother tongue. The proprieties and delicacies of English are known to few. It is impossible even for a good wit to understand and practise them without the help of a liberal education, long reading, and digesting of those few good authors we have amongst us, the knowledge of men and manners, the freedom of habitudes and conversation with the best of company ; and in short, without weiring off the rust which he contracted while he was lying in a stock of learning. Thus difficult it is to understand the purity of English, and critically to discern not only good writers from bad, or a proper style from a corrupt, but also to distinguish that which is pure in a good author from that which is vicious and corrupt to him.

(b) It is, indeed, the faculty of remembrance which may be said to place us in the class of moral agents. If we were to act only in consequence of some immediate impulse, and receive no direction from internal motives of choice, we should be pushed forward by an invincible fatality, without power or reason. for the most part, to prefer one thing to another, because we could make no comparison but of objects which might both happen to be present. We owe to memory not only the increase of our knowledge, and our progress in rational inquiries, but many other intellectual pleasures. Indeed almost all that we can be said to enjoy is past or future ; the present is in perpetual motion, it leaves us as soon as it arrives, it ceases to be present before its presence is well perceived, and is only known to have existed by the effects which it leaves behind,

2. Give, in your own words, the meaning of *one* of the following passages :—

(a) If there were dreams to sell,

What would you buy ?

Some cost a passing bell ;

Some a light sigh,

That shakes from Life's fresh crown

Only a rose leaf down.

If there were dreams to sell, .

Merry and sad to tell,

And the crier rang the bell,

What would you buy ?

A cottage lone and still

With bowers nigh,

Shadowy my woes to still,
 Until I die.
 Such pearl from Life's fresh crown
 Fair would I shake me down.
 Were dreams to have at will,
 This would best heal my ill,
 This would I buy.

- (b) Does the road wind up-hill at the way
 Yes, to the very end.
 Will the day's journey take the whole long day ?
 From morn to night, my friend,
 But is there for the night a resting-place ?
 A roof for when the slow dark house begin
 May not the darkness hide it from my face ?
 You cannot miss that inn.
 Shall I meet other wayfarers at night ?
 Those who have gone before
 Then must I knock, or call when just in sight ?
 They will not keep you standing that door.
 Shall I find comfort, travel sore and weak ?
 Of labour you shall find the sum.
 Will there be beds for me and all who seek ?
 Yea, beds for all who come.

3. Write an essay on *one* of the following subjects :—

- (a) Reading maketh a full man, conference a ready man, and writing an exact man.
 (b) The advantages of Scientific Education, with special reference to the conditions of Modern India.
 (c) 'You might read all the books in the British Museum and remain an utterly "illiterate", uneducated person ; but if you read ten pages of a good book, letter by letter—that is to say, with real accuracy—you are for evermore in some measure an educated person.
 (d) Foreign Travel.
 (e) Love thou thy land, with love far-bought
 From out the storied past, and used
 Within the present.

1927

* ENGLISH—PASS

First Paper

1. *Either*, 'O Julius Caesar, thou art mighty yet !
 Thy spirit walks abroad and turns our swords
 In our own proper entrails.'

Can this be accepted as the keynote of the play of *Julius Caesar* ?
Or, Distinguish between Brutus and Cassius as conspirators.

2. *Either*, On what ground is it held that Shakespeare possessed first-hand knowledge of Venice ?

Or, How has the conflict between love and duty been shown in Portia (in the *Merchant of Venice*) ?

3. *Either*, Give a summary of Wordsworth's *Affliction of Margaret*, or Byron's *Elegy on Thyrza*.

Or, Show the connexion of ideas in Wordsworth's *Ode to Duty*, or Coleridge's *Youth and Age*.

4. Explain with reference to the context any four of the extracts :—

- (a) If I could pray to move, prayers would move me ;
But I am constant as the northern star,
Of whose true fixed and resting quality
There is no fellow in the firmament.
- (b) By heaven, I had rather coin my heart,
And drop my blood for drachmas, than to wring
From the hard hand of peasants their vile trash
By any indirection.
- (c) If Hercules and Lichas play at dice,
Which is the better man, the greater throw
May turn by fortune from the weaker hand.
- (d) The duke cannot deny the course of law
For the commodity that strangers have
With us in Venice if it be denied,
Will much impeach the justice of his state.
- (e) Many changes have been run
Since Ferdinand and you begun
Your course of love, and Ariel still
Has tracked your steps and served your will.
Now in humbler, happier lot,
This is all remember'd not.
- (f) Thou wast not born for death, immortal Bird !
No hungry generations tread thee down ;
The voice I hear this passing night was heard
In ancient days by emperor and clown :
Perhaps the selfsame song that found a path
Through the sad heart of Ruth, when sick for home,
She stood in tears amid the alien corn.

Second Paper

1. In what sense may Burke be called an Imperialist ? Illustrate your answer by references from your text.

2. *Either*, In the character of the Americans, a love of freedom is the predominating feature which marks and distinguishes the whole.'

What, according to Burke, are the causes of this "love of freedom"?

Or, Give the substance of the arguments against Lord North's scheme of 'a ransom by auction.'

3. Explain with reference to the context any *two* of the following passages :

(a) Whilst we behold them penetrating into the deepest frozen recesses of Hudson's Bay and Davis's Straits, whilst we are looking for them beneath the arctic circle, we hear that they are at the antipodes, and engaged under the frozen serpent of the south.

(b) It would be curious to see the Guinea captain attempting at the same instant to punish his proclamation of liberty, and to advertise his sale of slaves.

(c) Courts incommodiously situated, in effect, deny Justice ; and a court, partaking in the fruits of its own condemnation is a robber.

4. Answer any *two* of the following :—

(a) What do you exactly understand by the expression 'Higher Command'? Give in your own words the substance of Haldane's remarks on it.

(b) The primary function of a court thus established is much to discover the merits of the case and make an equitable award, as to keep the peace and prevent the extension of wild and irregular blood-feuds.

By what line of arguments does Hobhouse come to the above conclusion ?

(c) *Either*, How does Asquith prove the indispensable necessity of liberty and historical studies ?

Or, What do you consider to be the peculiar features and functions of American state universities ?

5. Explain with reference to the context any *two* of the following passages :—

(a) The Spirit needs but little surrounding for its development and that little it finds as readily in the solitude of the Braid Hill as on the banks of the Isis or the Cam, in the walks round Arthur's Seat as in the gardens of Magdalen or of Trinity.

(b) 'He that sheddeth man's blood, by man shall his blood be shed' ; is the earliest law given in the Old Testament, and on this point the New Testament may be said to be a faithful reflection of the historical facts.

(c) The subjects of Darius and the subjects of Theebaw obeyed as a matter of course.

6. *Either*, Give some idea of the historical and political setting of Jeremiah's ministry and the attitude adopted by the prophet to the problems of his day,

Or, Much of the teachings of the prophets 'was an inspired reminder of religious and moral truths already known, with denunciations of sin and threats of punishment, &c.

Illustrate the above remarks by reference from your text.

7. Annotate any *two* of the following :—

(a) *Either*, And in that day there shall be a root of Jesse, which shall stand for an ensign of the people, to it shall the Gentiles seek ; and his rest shall be glorious.

Or, In that day the root of Jesse who standeth for an ensign of people, him the Gentiles shall beseech, and his sepulchre shall be glorious.

(b) *Either*, He shall not cry, nor lift up, nor cause his voice to be heard in the street. A bruised reed shall he not break, and the smoking flax shall he not quench.

Or, He shall not cry, nor have respect to person, neither shall his voice be heard abroad. The bruised reed he shall not break, and smoking flax he shall not quench.

(c) *Either*, Where is he that led them by the right hand, of Moses with his glorious arm, dividing the water before them to make an everlasting name.

Or, He that brought out Moses by the right hand, by the arm of his majesty ; that divided the waters before them to make himself an everlasting name.

Third Paper.

1. Give in your own words the substance of *one* of the following passages :—

(a) In sober truth, whatever homage may be professed or even paid, to real or supposed mental superiority, the general tendency of things throughout the world is reader of mediocrity the ascendant power among mankind. In ancient history, in the middle ages, and in a diminishing degree through the long transition from feudalism to the present time, the individual was a power in himself ; and if he had either great talents or a high social position, he was a considerable power. At present individuals are lost in the crowd. In politics it is almost a triviality to say that public opinion now rules the world. The only power deserving the name is that of masses, and of governments while they make themselves the organ of the tendencies and instincts of masses. This is as true in the moral and social relations of private life as in public transactions. Those whose opinions go by the name of public opinion, are not

always the same sort of public ; in America they are the whole white population ; in England, chiefly the middle class. But they are always a mass, that is to say, collective mediocrity. And what is a still greater novelty, the mass do not now take their opinions from dignitaries in Church or State, from ostensible leaders, or from books. Their thinking is done for them by men much like themselves, addressing them or speaking in their name, on the spur of the moment, through the newspapers.

(b) Her singular talents for government were founded equally on her temper and on her capacity. Endowed with a great command over herself, she soon obtained an uncontrolled ascendancy over her people ; and while she merited all their esteem by her real virtues she also engaged their affections by her pretended ones. Few sovereigns of England succeeded to the throne in more difficult circumstances ; and none ever conducted the government with such uniform success and felicity. Though unacquainted with the practice of toleration (the true secret for managing religious factions), she preserved people, by her superior prudence, from those confusions in which theological controversy had involved all the neighbouring nations. And though her enemies were the most powerful princes in Europe, the most active, the most enterprising, the least scrupulous, she was able by her vigour to make deep impressions on their states. Her own greatness meanwhile remained untouched and unimpaired.

2. Give in your own words the substance of *one* of the following poems :—

(a) Money ! thou bane of bliss and source of woe,

Whence com'st thou, that thou art so fresh and fine ?

I know thy parentage is base and low ;

Man found thee poor and dirty in a mine.

Sure thou didst so little contribute

To this great kingdom which thou now hast got,

That he was fain, when thou wast destitute,

To dig thee out of thy dark cave and grot.

Then forcing thee, by fire he made thee bright ;

Nay, thou hast got the face of man ; for we

Have with our stamp and seal transferr'd our right ;

Thou art the man, and man but dross to thee.

Man calleth thee his wealth, who made thee rich ;

And while he digs out thee, falls in the ditch.

(b) Nothing so difficult as a beginning

In poesy, unless perhaps the end ;

For oftentimes when Pegasus seems winning

The race, he sprains a wing, and down we tend,

Like Lucifer when hurl'd from heaven for sinning ;

Our sin the same, and hard as his to mend,

Being pride, which leads the mind to soar too far,
 Till our own weakness shows us what we are.
 But Time, which brings all beings to their level,
 And sharp Adversity, will teach at last
 Man,—and as we would hope—perhaps the devil,
 That neither of their intellects are vast :
 While youth's hot wishes in our red veins reyel,
 We know not this—the blood flows on too fast :
 But as the torrent widens towards the ocean,
 We ponder deeply on each past emotion.

3. Write an essay on *one* of the following :

- (a) Honour and shame from no condition rise,
 Act well your part, there all the honour lies.
- (b) Journalism—its duties and responsibilities.
- (c) I call a complete and generous education that which fits a man to perform justly, skilfully, and magnanimously, all the offices, both private and public, of peace and war.
- (d) Talent may be cultivated in retirement ; character is formed in the current of the world.

1928

ENGLISH—PASS.

First Paper.

1. *Either*, Has Shakespeare failed to do justice to the character of Caesar ?

Or, Compare Brutus and Antony as orators, illustrating your answer with quotations from the play.

2. *Either*, 'When he wrote *As You Like It* Shakespeare was himself in the Forest of Arden.' Explain and illustrate this statement.

Or, Write a critical note on Touchstone's wit.

3. *Either*, Discuss Shelley's attitude towards nature. Is it very different from Wordsworth's ?

Or, Give the substance of *one* of the following pieces and point out its beauties :—(a) Scott's *Rosabelle*, (b) Shelley's *Recollection*, (c) Wordsworth's *Ruth*.

4. Explain, with reference to the context, any *four* of the following passages :—

- (a) He doth bestride the narrow world
 Like a Colossus ; and we petty men
 Walk under his huge legs, and peep about
 To find ourselves dishonourable graves.

- (b) Here wast thou bay'd, brave hart.
 Here didst thou fall ; and here thy hunters stand,
 Sign'd in thy spoil, and crimson'd in thy lethe,
 O world ! thou wast the forest to this hart ;
 And this, indeed. O world ! the heart of thee.
- (c) Here feel we but the penalty of Adam,
 The season's difference, as the icy fang
 And churlish chiding of the winter's wind.
- (d) 'Tis a Greek invocation, to call fools into a circle. I'll go sleep. if I can ; If I cannot, I'll rail against all the first-born of Egypt.
- (e) Underneath day's azure eyes,
 Ocean's nursling, Venice lies,—
 A peopled labyrinth of walls,
 Amphitrite's destined haïls,
 Which her hoary sire now paves,
- (f) But O fair creature ! in the light
 Of common day, so heavenly bright,
 I bless Thee Vision as thou art,
 I bless thee with a human heart.

Second Paper

1. What idea regarding Burke's imperial policy and conception of an empire can you form from his speech on conciliation with America ?

2. Point out the connection of any *two* of the following quotations with Burke's line of argument :—

- (a) I consider force not as an odious, but a feeble instrument.
- (b) You keep up revenue laws which are mischievous, in order to preserve trade laws that are useless.
- (c) The voluntary flow of heaped-up plenty, bursting from the weight of its own rich luxuriance, has ever run with a more copious stream of revenue, than could be squeezed from the dry husks of oppressed indigence, by the straining of all the politic machinery in the world.

3. Explain with reference to the context any *two* of the following :—

(a) Here they felt its pulse : and as they found that beat, they thought themselves sick or sound.....It is not easy indeed to make a monopoly of theorems and corollaries.

(b) This point is the great Serbonian bog, betwixt Damietta and Mount Cassius old, where armies whole have sunk.

(c) This is the commodity of price, of which you have the monopoly. This is the true act of navigation.

4. Answer any *two* of the following :—

(a) What, according to Haldane, is the part played by Universities in the training of leaders ?

(b) How does Hobhouse show that the methods of mitigating the blood feud are stimulated by the growth of the kingly power ?

(c) Wherein lies the excellence of popular government ? What are the dangers to which it is exposed ? Suggest safeguards, if any, against these dangers.

5. Explain with reference to the context any *three* of the following :—

(a) Statesmen and financiers and industrialists have never received two more magnificent presents than the *Wealth of Nations* and the Steam Engine ; and both came to them from within the walls of Glasgow College.

(b) Achan takes the accursed thing, the thing which had been devoted to Jahveh. The taboo on the thing devoted is at once communicated to Achan himself.

(c) We can see now how fortunate it was that the colonization of North America was deferred until after the Elizabethan period in England, the Luther period in Germany, and the splendid struggle of the Dutch for liberty in Holland.

(d) Political leaders are very seldom leaders of thought. Their skill is in the selection of practicable approximations to the ideal.

(e) Belief in authority supports governments *de jure*, the love of established order governments *de facto*. They combine to support a government which is *de jure* as well as *defacto*.

6. Write a short note on the place of the prophets among the Jews, and the important work they did for their nation.

7. Annotate any *two* of the following passages :—

(a) *Either*, And there shall come forth a rod out of the stem of Jesse, and a Branch shall grow out of his roots.

Or, And their shall come forth a rod out of the root of Jesse, and a flower shall rise up out of his root.

(b) *Either*, He is despised and rejected of men ; a man of sorrows, and acquainted with grief : and we hid as it were our faces from him ; he was despised, and we esteemed him not. Surely he hath borne our griefs, and carried out sorrows : yet we did esteem him stricken, smitten of God, and afflicted.

Or, Despised, and the most abject of men, a man of sorrows, and acquainted with infirmity : and his look was as it were hidden and despised, whereupon we esteemed him not. Surely he hath borne our infirmities, and carried our sorrows : and we have thought him as it were a leper and as one struck by God and afflicted.

(c) *Either*, Awake, awake, put on strength, O arm of the Lord ;

awake, as in the ancient days, in the generations of old. Art thou not it which hath dried the sea, the waters of the great deep; that hath made the depths of the sea a way for the ransomed to pass over?

Or, Arise, arise put on strength, O thou arm of the Lord: arise as in the days of old, in the ancient generations. Hast not thou dried up the sea, the water of the mighty deep, who madest the depth of the sea a way, that the delivered might pass over?

Third Paper

1. Give the substance of *one* of the following passages:—

(a) Sir,—The atrocious crime of being a young man, which the honourable gentleman has, with such spirit and decency, charged upon me, I shall neither attempt to palliate nor deny but content myself with wishing that I may be one of those whose follies may cease with their youth, and not of that number who are ignorant in spite of experience. Whether youth can be imputed to any man as a reproach, I will not, sir, assume the province of determining; but surely age may become justly contemptible, if the opportunities which it brings have passed away without improvement, and vice appears to prevail when the passions have subsided.

The wretch who, after having seen the consequences of a thousand errors, continues still to blunder, and whose age has only added obstinacy to stupidity, is surely the object either of abhorrence or contempt, and deserves not that his gray hairs should secure him from insult. Much more, sir, is he to be abhorred who, as he has advanced in age, has receded from virtue, and become more wicked with less temptation; who prostitutes himself for money which he cannot enjoy, and spends the remains of life in the ruin of his country.

(b) Dissipation of mind and length of time are the remedies to which the greatest part of the mankind trust in their afflictions. But the first of these works a temporary, the second a slow effect; and such are unworthy of a wise man. Are we to fly from ourselves that we may fly from our misfortune, and fondly to imagine that the disease is cured because we find means to get some moments of respite from pain? Or shall we expect from time, the physician of brutes, a lingering and uncertain deliverance? Shall we wait to be happy till we can forget that we are miserable and owe to the weakness of our faculties a tranquillity which ought to be the effect of their strength? Far otherwise. Let us set all our past and present afflictions at once before our eyes. Let us resolve to overcome them instead of flying from them, or wearing out the sense of them by long and ignominious patience. Instead of palliating remedies, let us use the incision—knife and the caustic, search the wound to the bottom and work an immediate and radical cure.

2. Give the substance of *one* of the following passages :—

(a) With wise intent

The hand of Nature on peculiar minds
 Imprints a different bias, and to each
 Decrees its province in the common toil.
 To some she taught the fabric of the sphere.
 The changeful moon, the circuit of the stars,
 The golden zones of heaven ; to some she gave
 To weigh the moment of eternal things,
 Of time, and space, and Fate's unbroken chain,
 And will's quick impulse : others by the hand
 She led o'er vales and mountains to explore
 What healing virtue swells the tender veins
 Of herbs and flowers. But some, to higher hopes
 Were destin'd ; some within a finer mould
 She wrought, and tempered with a purer flame,
 To these the Sire Omnipotent unfolds
 The world's harmonious volume, there to read
 The transcript of himself. On every part
 They trace the bright impressions of his hand.

(b) Crouch'd on the pavement, close by Belgrave Square,
 A tramp I saw, ill, moody, and tongue tied.
 A babe was in her arms and at her side
 A girl ; their clothes were rags their feet were bare
 Some labouring men, whose work lay somewhere there,
 Pass'd opposite ; she touch'd her girl, who cried
 Across, and begg'd and came back satisfied.
 The rich she had let pass with frozen stare.
 Thought I : Above her state this spirit towers ;
 She will not ask of aliens, but of friends,
 Of sharers in a common human fate.
 She turns from that cold succour, which attends
 The unknown little from the unknowing great,
 And points us to a better time than ours.

3. Write an essay on *one* of the following subjects :—

(a) The respective advantages and drawbacks of a literary and a scientific career.

(b) Describe the aspect of a district under water. Give suggestions for the prevention of the flooding of districts.

(c) If you did not live in India, which country would you like to live in and why ?

(d) If you have visited a picture gallery or a place of historical interest, give a detailed descriptions of the objects which interested you.

1929

ENGLISH—PASS

First Paper

1. *Either*, Write a note on the supernatural elements in *Macbeth*.
Or, Is Shakespeare's presentation of the character of Caesar historically correct?
2. 'In Shakespeare's plays women always take the initiative,' How far is this true of *As You Like It*?
3. *Either*, Compare and contrast Tennyson's love of Nature with Arnold's.
Or, Compare the two poems on the Skylark in Palgrave to bring out the characteristics of Wordsworth and Shelley.
4. Illustrate Shakespeare's artistic skill in the handling of the opening scenes of his Plays.
5. 'Shakespeare's women act not on thought but on instinct.' Discuss.
6. *Either*, What is your estimate of E. Brontë's poetry?
Or, What place would you assign to Scott as a romantic poet?
7. Explain, with reference to the context, any *three* of the following passages :—
 - (a) Present fears
 Are less than horrible imaginings :
 My thought, whose murder yet is but fantastical,
 Shakes so my single state of man that function
 Is smother'd in surmise, and nothing is
 But what is not.

Or,

 Here wast thou bay'd brave hart,
 Here didst thou fall ; and here thy hunters stand,
 Sigh'd in thy spoil, and crimson'd in thy lethe.
 O World, thou wast the forest to this hart ;
 And this, indeed O world, the heart of thee.
 - (b) Leander, he would*have lived many a fair year, though Hero had turned nun, if it had not been for a hot midsummer night.
 - (c) And Pan by noon and Bacchus by night,
 Fleeter of foot than the fleet-foot Kid,
 Follows with dancing and fills with delight
 The Maenad and the Bassarid.

Or,

Yet, in his worst pursuits, I ween,
That sometimes there did intervene
Pure hopes of high intent :
For passions, link'd to forms so fair
And stately, needs must have their share
Of noble sentiment.

- (d) Still fly, plunge deeper in the bowering wood
Averse, as Dido did with gesture stern
From her false friend's approach in Hades turn,
Wave us away, and keep thy solitude !

Or,

As music and splendour
Survive not the lamp and the lute,
The heart's echoes render
No song when the spirit is mute—
No song but sad dirges,
Like the wind through a ruined cell,
Or the mournful surges
That ring the dead seaman's knell.

Second Paper

1. Discuss the statement, giving references to your text that Burke is a statesman writing like a poet.

2. Amplify after Burke the ideas contained in any *two* of the following passages :—

(a) You keep up revenue laws which are mischievous, in order to preserve trade laws that are useless.

(b) Abstract liberty, like other mere abstractions, is not to be found.

(c) Magnanimity in politics is not seldom the truest wisdom, and a great empire and little minds go ill together.

3. Explain, with reference to the context, any *two* of the following passages :—

(a) Here is a canonical book of ministerial scripture ; the general epistle to the Americans.

(b) He had put together a piece of joinery, so crossly indented and whimsically dove-tailed ; such a piece of diversified mosaic ; such a tessellated pavement without cement ; that it was indeed a very curious show ; but utterly unsafe to touch, and unsure to stand on.

(c) They augur misgovernment at a distance ; and snuff the approach of tyranny in every tainted breeze.

(d) When this game is played, I really think it is more to be feared that the people will be exhausted, than that government will not be supplied.

4. Answer any *two* of the following questions :—

(a) Give a sketch of the character of Reuben Bourne (in Nathaniel Hawthorne's story, *Roger Malvin's Burial*), specially showing the influence exercised on it by the indirect lie told by him to his wife.

(b) How would you justify the opinion that John Oakhurst was 'at once the strongest and yet the weakest of the outcasts of Poker Flat'?

(c) What is your conception of the character of Mr. Tymperley as portrayed by Gissing? Illustrate your answer by references to your text. Is the conclusion in your opinion the legal outcome of the hero's environment and character?

5. *Either*, Justify the opinion that the writings of Isaiah are poetical both in form and spirit.

Or, Reproduce the substance of the predictions regarding the Messiah which you find in your text.

6. Annotate any *two* of the following :—

(a) *Either*, The voice of him that crieth in the wilderness, prepare ye the way of the Lord, make straight in the desert a high-way for our God.

Or, The voice of one crying in the desert : Prepare ye the way of the Lord; make straight in the wilderness the paths of our God.

(b) I will make a new covenant with the house of Israel and with the house of Judah : Not according to the covenant that I made with their fathers in the day that I took them by the hand to bring them out of the land of Egypt : which my covenant they brake.

(c) *Either*, The portion of Jacob is not like them, for he is the former of all things : and Israel is the rod of his inheritance : the Lord of hosts is his name.

Or, The portion of Jacob is not like them : for he that made all things he it is, and Israel is the sceptre of his inheritance : the Lord of hosts is his name.

Third Paper

1. Give in your own words the substance of *one* of the following passages :—

(a) The higher the view which men take of life, the more they lose sight of their own pleasures or interests. True religion is not working for a reward only, but is ready to work equally without a reward. It is not doing the will of God for the sake of eternal happiness, but doing the will of God because it is best, whether rewarded or unre-

warded. And this applies to others as well as to ourselves. For he who sacrifices himself for the good of others does not sacrifice himself that they can be saved from the persecution which he endures for their sakes, but rather that they in their turn may be able to undergo similar sufferings, and like him stand fast in the truth. To promote their happiness is not his first object, but to *elevate* their moral nature. Both in his own case and that of others there may be happiness in the distance, but if there were not happiness he would equally act as he does. We are speaking of the highest and noblest nature ; and a passing thought naturally arises in our minds, whether that can be the first principle of morals which is hardly regarded in their own case by the greatest benefactors of mankind ?

(b) Mankind must have laws, and conform to them, or their life would be as bad as that of the most savage beast, and the reason for this is that no man's nature is able to know what is best for the social state of man ; or knowing, always able to do what is best. In the first place, there is a difficulty in apprehending that the true art of politics is concerned, not with private but with public good—for public good binds together states but private only distracts them, nor do men always see that the gain is greater both to the individual and the state, when the state and not the individual is first concerned. In the second place, even if a person know as a matter of science that this is the truth, but is possessed of absolute and irresponsible power, he will never be able to abide in this principle or to persist in regarding the public good as primary in the state, and the private good as secondary. Human nature will be always drawing him into avarice and selfishness, avoiding pain and pursuing pleasure without any reason, and will bring these to the front, obscuring the juster and better ; and so working darkness in his soul will at last fill with evil both him and the whole city. For if a man were born so divinely gifted that he would naturally apprehend the truth, he would have no need of laws to rule over him ; for there is no law or order which is above knowledge, nor can mind, without impiety, be deemed the subject or slave of any man but rather the lord of all. I speak of mind true and free, and in harmony with nature. But then there is no such mind anywhere, or at least not much ; and therefore we must choose law and order, which are second best.

2. Give in your own words the substance of one of the following poems :—

- (a) If I should die, think only this of me ;
That there's some corner of a foreign field
That is for ever England. There shall be
In that rich earth a richer dust concealed ;
A dust whom England bore, shaped' made aware,

Gave, once, her flowers to love, her ways to roam,
 A body of England's breathing English air,
 Washed by the rivers, blest by suns of home.
 And think, this heart, all evil shed away,
 A pulse in the eternal mind, no less
 Gives somewhere back the thoughts by England given ;
 Her sights and sounds ; dreams happy as her day ;
 And laughter learnt of friends ; and gentleness ;
 In hearts at peace, under an English heaven.

- b) Give me a cottage on some Cambrian wild,
 Where, far from cities, I may spend my days,
 And, by the beauties of the scene beguiled,
 May pity man's pursuits, and shun his ways.
 While on the rock I mark the browsing goat,
 List to the mountain-torrent's distant noise,
 Or the hoarse bittern's solitary note,
 I shall not want the world's delusive joys :
 But with my little scrip, my book, my lyre,
 Shall think my lot complete, nor covet more ;
 And when, with time, shall wane the vital fire,
 I'll raise my pillow on the shore,
 And lay me to rest, where the wild wave
 Shall make sweet music o'er my lonely grave.

3. Write an essay on *one* of the following subjects :—

- (a) The most suitable profession for an educated Indian at the present time.
 (b) The modern Bengali stage.
 (c) Broadcasting in India.
 (d) The ideals of Indian womanhood.
 (e) Your favourite book or author.

1930

ENGLISH—PASS

First Paper

1. *Either*, 'The words of the "weird sisters" quickened an impulse which had already made itself in Macbeth's heart,' Do you agree with this idea and, if so, can you trace the gradual quickening of the impulse in the course of the play ?

Or, Discuss the character of Lady Macbeth, pointing out how and why she gradually sinks into the back ground.

2. *Either*, Analyse the sub-plot of *The Tempest*, indicating your appreciation of Shakespeare's humour.

Or, Discuss the propriety and correctness of identifying Prospero with Shakespeare.

3. *Either*, 'In Shakespeare, it is always the woman who takes the initiative.' How far is this true of Lady Macbeth and Miranda?

Or, Show that the play of *The Tempest* has all the marks of a farewell work.

4. *Either*, What do you gather of Arnold's attitude towards life from the poems included in your selections?

Or, Show your acquaintance with the subject-matter and style of two of the following poems:—(a) *Tears, Idle Tears*, (b) *Mother and Son*, (c) *The Huntsman's Chorus*, (d) *Lost Days*.

5. State what you consider to be the fundamental idea in any four of the following:—(a) *Speak, God of Visions*, (b) *A Song of Flight*, (c) *The Last Ride Together*, (d) *The Pillar of the Cloud* (e) *November* (f) *The Choice*.

6. Explain, with reference to the context, any four of the following extracts:—

(a) It will have blood, they say blood will have blood ;
Stones have been known to move and trees to speak ;
Augurs and understood relations have
By maggot pies and choughs and rooks brought forth
The secret'st man of blood.

(b) It cannot
Be called our mother, but our grave ; where nothing,
But who knows nothing, is once seen to smile ;
Where sighs and groans and shrieks that rend the air
Are made not mark'd ; where violent sorrow seems
A modern ecstasy.

(c) If the commonwealth I would by contraries
Execute all things ; for no kind of traffic
Would I admit ; no name of magistrate ;
Letters should not be known ; contract, succession,
Bourn, bound of land, tilth, vineyard, none ;
No use of metal, corn, or wine, or oil ;
No occupation.

(d) Go bring the rabble.
O'er whom I give thee power, hereto this place ;
Incite them to quick motion ; for I must
Bestow upon the eyes of this young couple
Some vanity of mine art.

(e) Ah Love ! could thou and I with Fate conspire
To grasp this sorry scheme of things entire,

Would not we shatter it to bits—and then
Re-mould it nearer to the heart's desire ?

- (f) E'en no—but why the tale reveal
Of those whom, year by year unchanged,
Brief absence joined anew to feel
Astounded, soul from soul estranged ?

Second Paper

1. Reproduce the substance of Burke's remarks on *either* Grenville, or Townshend.

2. Explain, with reference to the context, any *two* of the following :—

(a) By such management, by the irresistible operation of such feeble counsels, so paltry a sum as three pence in the eyes of a financier : so insignificant an article as tea in the eyes of a philosopher. have shaken the pillars of a commercial empire that circled the whole globe.

(b) Interested timidity disgraces as much in the Cabinet, as personal timidity does in the field. But timidity, with regard to the well being of our country, is heroic virtue.

(c) But I know the map of England, as well as the noble lord or as any other person ; and know that the way I take is not the road to preferment.

3. Answer any *one* of the following :—

(a) Indicate briefly the line of argument by following which Carlyle comes to the following conclusion :—Though all Action is extended three ways, and the general sum of human Action is a whole Universe, with all limits of it unknown, History strives by running path after path, through the Impassable, in manifold directions and inter-sections, to secure for us some over-sight of the whole.

(b) What, according to Bagehot, are the characteristics common to both Shakespeare and Scott.

(c) How does Matthew Arnold try to show that, 'Marcus Aurelius incurs no moral reproach by having authorized the punishment of the Christians ; he does not thereby become in the least what we mean by a *persecutor* ?

4. Explain, with reference to the context, any *two* of the following :

(a) Neither Livy, nor Tacitus, nor Terence.....nor Pliny is an adequate spokesman for the Imperial City. They wrote Latin ; Cicero writes Roman.

(b) There is probably some strange weakness in the printer, and some fatal error in the age, when in thinking over the examples of their greatest work, we remember no expression either of religion or

heroism, and instead of reverently naming a Madonna di San Sisto, can only whisper modestly 'Mrs. Pelham feeding chickens.'

(c) They could not pass it by, nor, having entered, leave it.. It was a place besieged ; the shopman like the Jews rebuilding Salem, had a double task.

5. Answer one of the following :—

(a) What do you consider to be the aim of Mark Rutherford's story *The Sweetness of a Man's Friends* ? Indicate how the alter nation in the relation between Margaret and the narrator of the story was brought about.

(b) Comment on Henry Harland's story *The House of Eulalie* as an instance of 'an illusion that was not a falsehood.'

(c) Trace the gradual change in Denis de Beaulieu from indifference to love for Blanche. Does he lose the reader's respect for this change in his attitude ?

6. Either, To what extent do you agree with the opinion that the contents of the Epistle of St. James on examination are seen to consist of a series of maxims, essays, and discourses ? Illustrate your answer by references to your text.

Or, It is true that the vision of Peter foreshadowed a new movement for the Christian Church which then for the first time traversed the gulf separating Jew from Gentile ? Illustrate your answer by reference to your text.

Third Paper.

1. Give in your own words the substance of one of the following poems :—

(a) I must not think of thee ; and, tired yet strong,
I shun the thought that lurks in all delight—
The thought of thee—and in the blue Heaven's height.
And in the sweetest passage of a song.
Oh, just beyond the fairest thoughts that throng
This breast, the thought of thee waits, hidden yet bright ;
But it must never, never come in sight ;
I must stop short of thee the whole day long.
But when sleep comes to close each difficult day.
When night gives pause to the long watch I keep,
And all my bonds I needs must loose apart,
Must doff my will as raiment laid away,—
With the first dream that comes with the first sleep
I run, I run, I am gathered to thy heart.

(b) All things uncomely and broken, all things worn out and old,
The cry of a child by the roadway, the creak of a lumbering
cart,

The heavy steps of the ploughman, splashing the wintry
mould,
Are wronging your image that blossoms a rose in the deeps
of my heart.
The wrong of unshapely things is a wrong too great to
be told ;
I hunger to build them anew and sit on a green knoll
apart,
With the earth and the sky and the water, remade, like a
casket of gold.
For my dreams of your image that blossoms a rose in the
deeps of my heart.

2. Give in your own words the substance of *one* of the following passages :—

(a) The cat has not come unmarked through the horror of ages when she was more persecuted than the Jews, and had only the witch for a friend. We still attribute to the petted cat qualities developed in the outcast. The well-fed cat is not a thief, though should its owners under-estimate its appetite, the patted darling will steal with surprising agility and cleverness, and it cannot resist fish. We must judge the thief by her own code of virtue. The cat who does not acknowledge man for her master no more steals from him than we steal honey from the bee or cowslip from the field ; it is not like filling up an income-tax form dishonestly. Nor is the cat treacherous because it has sharp claws. One cannot be a traitor where one owes no allegiance. The cat gives her fealty only where she loves and then no animal is more loyal. We should not mistake her habitual courtesy for love ; she is by nature polite. We can hardly train a dog to say 'Thank you ; he expects another bite. The cat often thanks us in a spontaneous little mew, half purr. She may take the milk from our hands, purringly show a kindly interest in our existence, share the rung most amicably, and yet not love us. And we ought rather to commend her customary forbearance and gentleness, than complain of the tiger she lets loose when she can bear us no longer. We have never won the affection of the cat who turns on us ; she prefers the house we live in to ourselves. Nor should this surprise us ; the cat does not give her love for milk ; it is not the cupboard sort. We can win it only by loving her ; she gives her love for ours. We may test her respect and her love. If she loves she trusts us absolutely ; she knows we would shield her from all harm and believes we can. She will let us take all her new-born kittens away save the one we leave her for charity, and believe we mean only kindness...She will sometimes follow us about like a dog, even along

the street, till her timidity and our discouragement check her, for she will not go home at our command ; hers is an independent, thinking friendship, not obedience and worship.

(b) In this sacred grove there grew a certain tree round which at any time of the day, and probably far into the night a grim figure might be seen to prowl. In his hand he carried a drawn sword, and he kept peering warily about him as if every instant he expected to be set upon by an enemy. He was a priest and a murderer ; and the man for whom he looked was sooner or later to murder him and hold the priesthood in his stead. Such was the rule of the sanctuary. A candidate for the priesthood could only succeed to office by slaying the priest, and, having slain him, he retained office till he was himself slain by a stronger or a craftier.

The post which he held by this precarious tenure carried with it the title of king ; but surely no crowned head lay uneasier, or was visited by more evil dreams, than his. For year in, year out, he had to keep his lonely watch, in summer and winter, in fair weather and foul, and whenever he snatched a troubled slumber it was at the peril of his life. The least relaxation of his vigilance, the smallest abatement of his strength of limb or skill of fence, put him in jeopardy ; gray hairs might seal his death-warrant. To gentle and pious pilgrims at the shrine the sight of him may well have appeared to darken the fair landscape, as when a cloud suddenly blots the sun on a bright day. The dreamy blue of Italian skies, the dappled shade of summer woods, and the sparkle of waves in the sun can have accorded but ill with that stern and sinister figure. Rather we picture to ourselves the scene as it may have been witnessed by a belated wayfarer on one of those wild autumn nights when the dead leaves are falling thick, and the winds seem to sing the dirge of the dying year. It is a sombre picture, set to melancholy music—the background of forest showing black and jagged against a lowering and stormy sky, the sighing of the wind in the branches, the rustle of the withered leaves under foot, the lapping of the cold water on the shore, and in the foreground, pacing to and fro, now in twilight and now in gloom, a dark figure with a glitter as of steel at the shoulder whenever the pale moon, riding clear of the cloud rack peers down at him through the umtted boughs.

3. Write an essay on *one* of the following subjects :—

- (a) 'Patriotism is not enough'.
- (b) Science and Religion.
- (c) The Indian ideal of womanhood.
- (d) 'East is East and West is West and ne'er the twain shall meet'.

1931

ENGLISH—PASS

First Paper

1. *Either*, 'The character who is dramatic plucks for himself the fruit of his own deeds.' Discuss.

Or, Compare Caliban with (a) Ariel, and (b) the witches in *Macbeth*.

2. *Either*, Write a brief essay on the soliloquies in *Macbeth*.

Or, Show that *Macbeth* is not equal to the struggle with fate and conscience.

3. *Either*, '*The Tempest* is Shakespeare's most beautiful play, the most beautiful play in the world.' Discuss.

Or, Illustrate that Prospero is a man with a giant's power which he uses like a god.

4. *Either*, Illustrate by reference to their poem the characteristics of the poetry of either Emily Bronte or Swinburne.

Or, Show how the poetry of Tennyson differs from that of Browning.

5. Elucidate the central idea in any *four* of the following poems :—*A Greeting, Meeting at Night, Lucifer in Starlight, Mimmermus in Church, Lost Days, Summer Evening*.

6. Explain with reference to the context any *four* of the following passages :—

(a) He loves us not ;

He wants the natural touch : for the poor wren,
The most diminutive birds, will fight,
Her young ones in her nest, against the owl,
All is the fear and nothing is the love,
As little is the wisdom, where the flight
So runs against all reason.

(b) He shall spurn fate, scorn death, and bear
His hopes 'bove wisdom, grace and fear ;
And you all know security
Is mortal's chiefest enemy.

(c) Whether thou be'st he or no,
Or some enchanted trifle to abuse me,
As late I have been, I not know : thy pulse
Beats as of flesh and blood ; and, since I saw thee,
The affliction of my mind amends, with which,
I fear a madness held me.

- (d) Fly hence, our contract fear !
 Still-fly, plunge deeper in the bowering wood !
 Averse, as Dido did with gesture stern
 From her false friend's approach in Hades turn,
 Wave us away, and keep thy solitude.
- (e) Calm on the seas, and silver sleep,
 And waves that sway themselves in rest,
 And dead calm in that noble breast
 Which heaves but with the heaving deep.

Second Paper

1. Answer any *one* of the following :—

(a) 'Burke's pamphlets and speeches have lost nothing of their attraction by time.'

To what extent is this true of his *Letter to the Sheriffs of Bristol*, and why ?

(b) What do you know of the 'double legislature' holding authority over the American colonies ? When and why did they clash with each other ? Show how Rockingham's plan fully met the situation by restoring the 'ancient state of unsuspecting confidence in the mother country'.

(c) How does Burke show that the existence in England of a party favourable to America was desirable and that the views of such a party, even when expressed freely, were not calculated to foster the spirit of rebellion in the colonies ?

2. Explain, with reference to the context, any *two* of the following :—

(a) Nobody has such a fanatical zeal for the criminal justice of Henry the Eighth, that he will contend for executions which must be retaliated tenfold on his own friends ; or who has conceived so strange an idea of English dignity, as to think the defeats in America compensated by the triumphs at Tyburn.

(b) General rebellions and revolts of a whole people never were encouraged, now or at any time. They are always provoked.

(c) Instead of being a control on the crown on its own behalf it communicated a sort of strength to the royal authority.

2. Answer any *one* of the following :—

(a) Amplify the following statement :—

'Literature is of a personal character ; it consists in the enunciations and teachings of those who have a right to speak as representatives of their kind, and in whose words their brethren find an interpretation of their own sentiments, a record of their own experience, and a suggestion for their own judgments.'

(b) Discuss the following as an adequate criticism of R. L. Stevenson as revealed in his essay *A Penny Plain and Two pence Coloured* :—

‘He was not a great writer—in the sense in which Shakespeare is great. He belongs to the order of men who produce little things and shape them lovingly and exquisitely.

(c) What inferences about Shakespeare the man does Bagehot draw in his essay ?

4. Explain, with reference to the context, any two of the following :—

(a) The time seems coming when he who writes only how this ministerial conjurer out-conjured that other, and then guided, or at least held, something which he called the rudder of Government, but which was rather the spigot of Taxation, where with, in place of steering, he could tap, will pass for a more or less instructive Gazetteer, but will no longer be called a Historian.

(b) How is it that these English friends can so brightly point that particular order of humanity which we call ‘gentlemen and ladies’ but neither heroes, nor saints, nor angels ?

(c) The translators of the Bible talk of *pence* and not *denarii* and the admirers of Voltire do not celebrate him under the name of Aronet.

5. Answer any one of the following :—

(a) Write a short note on the character of Jabez Wilson as revealed in Conan Doyle’s story. What is your explanation of the insignificant part played in it by Dr. Watson ? Illustrate the following saying of Sherlock Holmes as a commentary on the problem of *The Redheaded League* :—‘As a rule, the more bizarre a thing is, the less mysterious it proves to be.

(b) Discuss the title of Stacy Aumonier’s story *The Great Unimpressible*. What do you consider to be its climax ? Is the reader gradually prepared for it ? If so, point out how this is done. Would its omission add to or detract from the value of the story ? Give reasons for your answer.

(c) Justify the remark that in *The Burglars* Mr. Kenneth Grahame ‘has not only caught but has also expressed the very spirit of boyhood.’ Compare this story with Mr. Pett Ridge’s *First Impressions* as pictures of boyhood, stating which of the two stories you prefer, and why.

6. Either, *The Acts of the Apostles* reveal to us the process by which an obscure Jewish sect expanded into a world-wide Church.

Prove the above by reference to your text.

Or, What do you regard as the principal ideas inculcated by St. Paul in the extracts from his *Epistles to the Romans* which appear in your text ?

Third Paper

1. Give the substance of the following passages :—

(a) There is a strong feeling in favour of cowardly and prudential proverbs. The sentiments of a man while he is full of ardour and hope are to be received, it is supposed, with some qualification. But when the same person has ignominiously failed and begins to eat up his words, he should be listened to like an oracle. Most of our pocket wisdom is conceived for the use of mediocre people, to discourage them from ambitious attempts, and generally console them in their mediocrity. And since mediocre people constitute the bulk of humanity, this is no doubt very properly so. But it does not follow that the one sort of proposition is any less true than the other, or that learus is not to be more praised than Mr. Samuel Budgett, the successful merchant. The one is dead, to be sure, while the other is still in his counting-house counting out his money : and doubtless this is a consideration. But we have, on the other hand, some bold and magnanimous sayings common to high races and natures, which set forth the advantage of the losing side, and proclaim it better to be a dead lion than a living dog. It is difficult to fancy how the mediocrities reconcile such sayings with their proverbs.

(b) Gentility is only a more select and artificial kind of vulgarity. It cannot exist but by a sort of borrowed distinction. It plumes itself up and reveals in the homely pretensions of the mass of mankind. It judges of the worth of everything by name, fashion, and opinion ; hence, from the curious absence of real qualities or sincere satisfaction in itself builds its supercilious and fantastic conceit on the wretchedness and wants of others. Violent antipathies are always suspicious, and betray a secret affinity. The difference between the 'great vulgar and small' is mostly in outward circumstances. The coxcomb criticizes the dress of the clown, as the pedant cavils at the bad grammar of the illiterate, or the prude is shocked at the backslidings of her frail acquaintance. Those who have the fewest resources in themselves naturally seek the food of their self love elsewhere. The most ignorant people find most to laugh at in strangers : scandal and satire prevail most in country places ; and a propensity to ridicule the slightest or most palpable deviation from what we happen to approve, ceases with the progress of common sense and decency.

2. Give the substance of *one* of the following poems :—

(a)

Man

He walks the world with mountains in his breast,
 And holds a hiltless wind in vassalage.
 Traustellar spaces are his fields of quest,
 Eternity his spirit's embassy.
 The uncared acre of the firmaments
 Under his hungry harrow, yields increase.
 While from the threshold of dim continents
 They beckon him, who bear the stars in lease.
 And yet is he a thane of foreigners,
 On sapphire throned, but in an unkinged house,
 Arrayed with honours, brodered in gold sheen—
 A palace in a town of sepulchres.
 Voices he hears, but knows not what they mean,
 His own to him the most mysterious.

(b)

The Earth Child.

Out of the veins of the world comes the blood of me ;
 The heart that beats in my side is the heart of the sea ;
 The hills have known me of old, and they do not forget ;
 Long ago I was friends with the wind ; I am friends with
 it yet.

The hills are grey, they are strange ; they breed desire
 Of a tune that the feet may march to and not tire ;
 For always up in the distance the thin roads wind,
 And passing out of sight, they pass not out of mind.
 I am glad when morning and evening alter the skies ;
 There speaks no voice of the stars but my voice replies ;
 When wave on wave all night cries out in its need,
 I listen, I understand ; my heart takes heed.
 Out of the red-brown earth, out of the grey-brown streams,
 Came this perilous body, cage of perilous dreams ;
 To the ends of all waters and lands they are tossed, they are
 whirled,

For my dreams are one with my body—yea, one with the world.

3. Write an essay on *one* of the following subjects :—

- (a) 'A little learning is a dang'rous thing ;
 Drink deep, or taste not the Pierian spring.'
 - (b) The spirit of adventure.
 - (c) Who so loseth his life shall save it.
 - (d) Advertising—its use and abuse.
 - (e) The Ideal Indian University
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1932

ENGLISH—PASS

First Paper

1. *Either*, Write a short essay on your favourite poet in *The Longer Narrative Poems*, giving full reasons for your preference and quoting from, or referring to, the poems you have read.

Or, Illustrate Tennyson's feeling for the Unseen, and Morris's feeling for the Middle Ages.

2. Discuss, with special reference to *Macbeth*, ONE of the following statements :—

(a) 'Shakespeare's conception of tragedy involved, over and above character, the suggestion of fatal forces, operating on the actions of mankind.'

(b) 'Death is of small account in Shakespeare's scheme of tragic values',

3. *Either*, What part is played by Banquo or Macduff in developing the plot of *Macbeth* ?

Or, Write a critical note on the lyrical element in *The Tempest*.

4. *Either*, Write a short essay on Shakespeare's use of the supernatural in *Macbeth* and *The Tempest*.

Or, Compare the characters of Caliban and Ariel.

5. Elucidate the statement of Coleridge *either* that '*The Tempest* addresses itself entirely to the imaginative faculty' or that 'the atmosphere of farewell hangs over *The Tempest*.'

6. Explain, with reference to the context, any *five* of the following passages, adding notes where necessary ;—

(a) Things without all remedy
Should be without regard : what's done is done.

(b) 'Who's there, i' the name of Beelzebub ? Here's a farmer that hanged himself on the expectation of plenty : come in time ; have napkins enow about you ; here you'll sweat for't.

(c) A living drollery. Now I will believe
That there are unicorns ! that in Arabia
There is one tree, the phoenix' throne ; one phoenix
At his hour reigning there.

(d) You were kneel'd to and importuned otherwise
By all of us, and the fair soul herself
Weigh'd between loathness and obedience, at
Which end o' the beam should bow.

- (e) But by mine eyes and by mine ears I swear,
I will be deafer than the blue-eyed cat,
And thrice as blind as any noonday owl,
To holy virgins in their ecstasies,
Henceforward.
- (f) And for awhile did he forget
The longings that had brought him there
In wondering at these marvels fair ;
And still for fear he doubted much
One jewel of their robes to touch.

Second Paper

1. *Either*, Write a short note on Burke as a practical politician, illustrating your answer by references to his remarks on civil freedom and his defence of party.

Or, Explain any *two* of the following remarks, showing clearly how Burke applies them :—

(a) Other laws may injure the community, this (partial suspension of the *Habeas Corpus* Act) dissolves it.

(b) *General* rebellions and revolts of a whole people never were encouraged, now or any time. They are always *provoked*.

(c) Nothing in progression can rest on its original plan.

2. Elucidate any *two* of the following extracts, adding notes where necessary :—

(a) Our subjects diminish as our laws increase.

(b) They have all the merit of volunteers, without risk of person or charge of contribution.

(c) He that accuses all mankind of corruption ought to remember that he is sure to convict only one.

3. *Either*, What differences do you notice between the characters of Goldsmith and those of Charles Lamb or Robert Louis Stevenson? How do you explain this? Illustrate your answer by references to your text.

Or, Characterize the humour of Dr. Johnson, as evidenced in his *Inspiration of a Garret*.

4. Explain, with reference to the context, any *two* of the following :—

(a) My grandmother appears as if she stood in a large drum, whereas the ladies now walk as if they were in a go cart.

(b) The smuggest of suburban hearthrugs is a crossroads between Delphi and Thebes and the homeliest of tabbies a sphinx who defies you.

(c) Do thou lend thine ear, Fielding, thou whom the great Richardson did accuse of vulgarity because thou didst discern natural

gentility in a footman' and yet was not to be taken in by airs of Pamela and my Lady G.

5. *Either*, Compare W. W. Jacobs's *False Colours* with C. E. Montague's *A propos des Bottes* as examples of the humorous short story.

Or, Give the plot of E. V. Lucas's *The Face in the Wall*. Does it in your opinion differ from the ordinary run of short stories,—and if so, in what respect? Give reasons for your answer.

6. *Either*, State what you know about St. Paul's experiences at Athens and Ephesus.

Or, How does St. Paul define faith? Illustrate after him the wonders of this Christian virtue.

Third Paper

1. Give the substance of *one* of the following passages :—

(a) Prose is the achievement of civilization, of people who have learned to discuss without blows or invective, who know that truth is hard to find and worth finding, who do not begin by accusing an opponent of wickedness, but elicit reason and patience by displaying them. You cannot say in poetry what the best prose says, or accomplish what the best prose accomplishes. Civilization may not surpass a primitive society in heights of rapture or heroism but it is, if it be civilization, better for everyday life, kinder, more rational, more sustained in effort; and this kindness and reason and sustained effort are expressed and encouraged in the masterpieces of prose. The French understood this long ago, because they prize civilization and enjoy it. Pascal, the French thinker, writing his *Provincial Letters* in 1656 upon a subject obscured by medieval subtleties and distorted by party passions, is already just, polite, and lucid; he does not even affect the magnificent disdain of Gibbon, the English historian, but is a civilized man talking to other civilized men, and therefore all the more deadly in debate. But it is fallacious that he would kill, not those who maintain them. He knows that the art of controversy is not to begin with invective but to state your case in such a way that those who like invective will supply it themselves against your adversary.

Though he is not clothed in shining armour, he fights for the children of light in all ages, with no pretence of being an angel or a dervish, but quietly appealing to the everlasting reason from whence comes his help.

(b) Thought and speech are inseparable from each other. Matter and expression are parts of one: style is a thinking out into language. This is what is called *literature*: not *things*, not the verbal symbol of things; not, on the other hand, mere *words*; but *thoughts*

expressed in language. Call to mind the meaning of the Greek word which expresses the special prerogative of man over the feeble intelligence of the inferior animals. It is called *Logos*: what does *Logos* mean? It stands for both *reason* and for *speech*, and it is difficult to say which it means more properly. It means both at once: why? because really they cannot be divided, because they are in a true sense one. When we can separate light and illumination, life and motion, the convex and the concave of a curve, then will it be possible for thought to tread speech under foot, and to hope to do without it—then will it be conceivable that the vigorous and fertile intellect should renounce its own double, its instrument of expression, and the channel of its speculations and emotions.

There are some critics who consider fine writing to be an *addition from without* to the matter treated of—a sort of ornament superinduced, or a luxury indulged in, by those who have time and inclination for such vanities. They speak as if *one* man could do the thought, and *another* the style. With them, 'fine writing' is a trick and a trade, and language is but the hired servant of reason. But can we really think that Homer, or Pindar, or Shakespeare, or Walter Scott, were accustomed to aim at diction for its own sake, instead of being inspired with their subject, and pouring forth beautiful words because they had beautiful thoughts? The elocution of a great intellect is great: his language expresses, not only his great thoughts, but his great self.

2. Gave the substance of *one* of the following poems:—

- (a) When God at first made Man,
 Having a glass of blessings standing by;
 Let us (said He) pour on him all we can:
 Let the world's riches, which dispersed lie,
 Contract into a span.
 So strength first made a way;
 Then beauty flow'd, then wisdom, honour, pleasure:
 When almost all was out, God made a stay,
 Perceiving that alone, of all His treasure,
 Rest in the bottom lay.
 For if I should (said He)
 Bestow this jewel also in my creature,
 He would adore my gifts instead of me,
 And rest in Nature, not the God of Nature:
 So both should losers be.
 Yet let him keep the rest,
 But keep them with repining restlessness:
 Let him be rich and weary, that at least,
 If goodness lead him not yet weariness
 May toss him to my breast.

(ψ) We are the music-makers,
 And we are the dreamers of dreams,
 Wandering by lone sea breakers,
 And sitting by desolate streams ;
 World losers and world-forsakers,
 On whom the pale moon gleams :
 Yet we are the movers and shakers
 Of the world for ever, it seems.
 With wonderful deathless deities
 We build up the world's great cities,
 And out of a fabulous story
 We fashion an empire's glory ;
 One man, with a dream, at pleasure,
 Shall go forth and conquer a crown ;
 And three with a new song's measure
 Can trample a kingdom down.
 We, in the ages lying
 In the buried past of the earth,
 Built Nineveh with our sighing.
 And Babel itself in our mirth ;
 And o'verthrew them with prophesying
 To the old of the new world's worth ;
 For each age is a dream that is dying,
 Or one that is coming to birth.

3. Write an essay on *one* of the following subjects :—

- (a) Flattery as a Fine Art-
- (b) The Pleasure of Fiction.
- (c) The Conquest of the Air.
- (d) The Autobiography of a Rupee.
- (e) The Languages of India and the Indian Nation.
- (f) Stamp-Collecting (or Coin-Collecting).

1933

ENGLISH—PASS

First Paper

1. *Either*, Compare the speeches of Brutus and Antony, laying special stress on the rhetorical devices by which the latter excites the mob to fury.

Or, 'The difference in the two women (Portia and Calpurnia) is not more remarkable than that in their husband's bearing and tone towards them.' Illustrate.

2. *Either*, Examine the external and internal evidences which may help you to determine the date of the composition of *The Tempest*.

Or, Discuss the character of Prospero. What moral lesson can be drawn from his conduct towards his wicked brother ?

3. *Either*, 'Had he (Shakespeare) never created a Miranda, we should never have been made to feel how completely the purely natural and the purely ideal can blend into each other.' Illustrate.

Or, It has been remarked that the play of *Julius Caesar* is wrongly named, and should have been called *Brutus*. Does this objection seem to you to be reasonable ?

4. *Either*, Sketch briefly the characters of the King and the vizier in Arnold's poem, *The Sick King in Bokhara*.

Or, Write a note on Byron's qualities as a narrative poet, with special reference to *Mazeppa's Ride*.

5. Explain any four of the following :—

- (a) For when the Lord of all things made himself
Naked of glory for His mortal change,
'Take thou my robe,' she said, 'for all is thine,' and she
Follow'd Him down, and like a flying star
Led on the gray-hair'd wisdom of the east.
- (b) If you but knew how you the purpose cherish
Whilst thus you mock it ! how, in stripping it,
You more invest it ! Ebbing men, indeed,
Most often do so near the bottom run
By their own fear or sloth.
- (c) Here wast thou bay'd, brave hart ;
Here didst thou fall ; and here thy hunters stand,
Sign'd in thy spoil, and crimson'd in thy lethe.
O world, thou wast the forest to this hart ;
And this, indeed, O world, the heart of thee.
- (d) *Ste.* Mistress line, is not this my jerkin ? Now is the jerkin
under the line : now, jerkin, you are like to lose your hair, and prove
a bald jerkin.
Trin- Do, do ; we steal by line and level, and like your grace.
- (e) It was no dream ; or say a dream it was,
Real are the dreams of Gods, and smoothly pass
Their pleasures in a long immortal dream.
- (f) O hateful error, melancholy's child,
Why dost thou show to the apt thoughts of men
The things that are not ? O error, soon conceived,
Though never comest unto a happy birth,
But kill'st the mother that engender'd thee !

- (g) Why should I relate
That objects which the Shepherd loved before
Were dearer now ? That from the Boy there came
Feelings and emanations—things which were
Light to the sun and music to the wind ;
And that the old Man's heart seemed born again ?

Second Paper

1. *Either*, Do you agree with the opinion that, with the passage of time Burke's moral wisdom shines more and more, only because it is based on the immutable principles of justice and morality ? Give reasons for your answer.

Or, Write a note on Burke as a man, basing your opinion on what you can infer of his character from his attitude towards America.

2. Explain any *two* of the following, adding notes where necessary :—

(a) You judge of the delinquency of men merely by the time of their guilt, make fortunes and accidents the rule of your justice.

(b) The Court gazette accomplished what the abettors of independence had attempted in vain.

(c) Liberty must be limited in order to be possessed.

3. *Either*, You will find that the essays of Charles Lamb appear with greater frequency than those of any other author in your text *English Essays*. What is your explanation of this partiality for his writings ?

Or, Write a short note on the appreciation of Nature and her beauties as seen in the essays of any *one* of the following writers :—

Henry Thoreau, John Ruskin, and Richard Jefferies.

4. Explain with reference to the context any *two* of the following :—

(a) Here lies a Lord of Life, aged six months. He would never be broken to the house, but was adorable after sin.

(b) All the couriers in Europe spurring rowel-deep make no stir in Mr. White's little Chartreuse.

(c) Men of old time worshipped cats as they worshipped crocodiles ; and those magnificent old mystics knew what they were about.

5. *Either*, Discuss Pater's dictum that *Esmond* is 'a perfect fiction'.

Or, Give in your own words Thackeray's description of the character and doings of those eighteenth-century 'wits' who figure in his *Esmond*.

6. *Either*, Comment upon the following :—'The *Psalms* are intended not for one age, but for all time.

Or, Discuss the statement that *Job* is a 'philosophical and theological dissertation in a dramatic form'. Your answer should be illustrated by references to your text.

Third Paper

1. Give the substance of *one* of the following passages :—

(a) It was a famous, almost a proverbial, remark that Sappho's poems were 'few but roses'. What should we say if we found roses on every table, rose trees along the streets, if our tramcars and lamp-posts were festooned with roses, if roses littered every staircase and dropped from the folds of every newspapers? In a week we should be organizing a 'campaign' against them as if they were rats or house flies. So with books. Week in, week out, a roaring torrent of novels, essays, plays, poems, books of travel, devotion, and philosophy, flows through the land—all good, all 'provocative of thought.' And they are so huge. Look at *The Forsyte Saga*, confessedly in itself a small library of fiction; *The Challenge to Sirius* is four short novels stitched together; consider the *Golden Bough*, how it grows. One is tempted to revolt and pretend in self-defence that these works are clever, facile, and bad. But they are not; far from it. The flood leaves you no breath. Hardly have you recovered from C. E. Montague's dazzling *Fiery Particles*, when Mr. Guedalla comes at you with *Masters and Men*. Stop reading for an instant and you miss something really first-rate.

(b) And so having brought into the world 'noble children', he rests from the labours of authorship. More than two thousand two hundred years have passed away since he returned to the place of Apollo and the Muses. Yet the echo of his words continues to be heard among men, because of all philosophers he has the most melodious voice. He is the inspired prophet or teacher who can never die, the only one in whom the outward form adequately represents the fair soul within; in whom the thoughts of all who went before him are reflected and of all who come after him are partly anticipated. Other teachers of philosophy are dried up and withered—after a few centuries they have become dust; but he is fresh and blooming, and is always begetting new ideas in the minds of men. They are one-sided and abstract; but he has many sides of wisdom. Nor is he always consistent with himself, because he is always moving onward, and knows that there are many more things in philosophy than can be expressed in words, and that truth is greater than consistency. He who approaches him in the most reverent spirit shall reap most of the fruit of his wisdom; he who reads him by the light of ancient commentators will have the least understanding of him.

2. Give the substance of *one* of the following poems :-

- (a) Of all the thoughts of God that are
Borne inward into souls afar,
Along the Psalmist's music deep,
Now tell me if that any is,
For gift or grace, surpassing this—
'He giveth His beloved, sleep' ?
What would we give to our beloved ?
The hero's heart, to be unmoved,
The poet's star-tuned harp, to sweep,
The patriot's voice to teach and rouse
The monarch's crown to light the brows
He giveth his beloved, sleep.
What do we give to our beloved ?
A little faith all undisproved,
A little dust to overweep,
And bitter memories to make
The whole earth blasted for our sake,
He giveth his beloved, sleep.
'Sleep soft, beloved !' we sometimes say,
Who have no time to charm away
Sad dreams that though the eyelids creep,
But never doleful dream again
Shall brake the happy slumber when
He giveth his beloved, sleep.
- (b) What is the existence of man's life
But open war, or slumbered strife ?
Where sickness to his sense presents ;
The combat of the elements ;
And never feels a perfect peace
Till earth's cold hand signs his release.
It is a storm, where the hot blood
Ovnties in rage the boiling flood ;
And each loud passion of the mind
Is like a furious gust of wind,
Which beats his bark with many a wave,
Till he casts anchor in the grave.
It is a flower, which buds and grows
And withers as the leaves disclose ;
Whose spring and fall faint seasons keep
Like fits of waking before sleep ;
Then shrinks into that fatal mould,
Where its first being was enrolled.

3. Write an essay on *one* of the following subjects :—

- (a) Indian womanhood,
 - (b) Charity is greater than justice.
 - (c) A thing of beauty is a joy for ever,
 - (d) The pleasures of life.
 - (e) The choice of books.
 - (f) The advantages of travel.
-

1934

ENGLISH—PASS

First Paper

1. *Either*, Point out the main deviations from history in *Julius Caesar* and *King Henry the Fourth, Part I*, and indicate the dramatic purposes served by them.

Or, The relation of husband and wife, as conceived in the historical plays, differs throughout from that relation as conceived in the tragedies. Discuss the statement, with special reference to the scene between Hotspur and Lady Percy, and that between Brutus and Portia.

2. *Either*, Consider the opinions of Caesar and Brutus about Cassius, and give your own estimate of his character.

Or, Brutus is 'a stoic by profession and in reality the reverse—acting deeds against his nature by the strong force of principle and will.' Discuss.

3. *Either*, Compare the characters of Hotspur and Prince Henry.
Or, Discuss the character of Falstaff.

4. *Either*, Narrate the story of *Muleykeh*, and explain the following remarks :—The narrative leads up to a supreme moment, and this resolves itself through a paradox of the heart.

Or, write a critical estimate of *Michael* as a narrative poem, and add a short note on its style.

5. Explain any *four* of the following :—

- (a) For every fiery prophet in old times,
And all the sacred madness of the bard,
When God made music thro, them, could but speak
His music by the framework and the chord ;
And as ye saw it ye have spoken truth.

(b) And Caesar's spirit rearing for revenge,
 With Ate by his side come hot from hell,
 Shall in these confines with a monarch's voice
 Cry 'Havoc', and let slip the dogs of war ;
 That this foul deed shall smell above the earth
 With carrion men, groaning for burial.

(c) All furnish'd all in arms ;
 All plum'd like estridges that wing the wind ;
 Baited like eagles having lately bath'd ;
 Glittering in golden coats, like images.

(d) Be angry when you will, it shall have scope ;
 Do what you will, dishonour shall be humour.
 O Cassius, you are yoked with a lamb
 That carries anger as the flint bears fire,
 Who, much enforced, shows a hasty spark,
 And straight is cold again.

(e) And, for the sage,
 Let spear-grass, and the spiteful thistle wage
 War on his temples. Do not all charms fly
 At the mere touch of cold philosophy ?

...
 Philosophy will clip an Angel's wings,
 Conquer all mysteries by rule and line.

(f) I am joined with no foot-land-rakers, no long staff six penny strikers, none of these mad mustachio purple-hued maltworms ; but with.....great oneyers, such as can...drink sooner than pray ; and yet Zounds, I lie ; for they pray continually to their saint. the common-wealth ; or rather...prey on her, for they ride up and down on her and make her their boots.

Second Paper

1. *Either*, Illustrate from your text the truth of Matthew Arnold's remarks that 'Burke is so great because, almost alone in England. he brings thought to bear upon politics, he saturates politics with thought.'

Or, how does Burke define (a) civil freedom' (b) the true end of legislature ?

Or, Reproduce Burke's observations against the partial suspension of the Habeas Corpus Act.

2. Explain any *three* of the following, taking at least *one* from each group :—

GROUP A

(a) We behold our native land.....deficient to her allies ; lofty to her subjects, and submissive to her enemies ; and three millions of the subjects of Great Britain are seeking for protection to English privileges in the arms of France.

(b) The general opinion is the vehicle and organ of legislative omnipotence.

(c) But nothing in progression can rest on its original plan. We may as well think of rocking a grown man in the cradle of an infant.

GROUP B

(a) It is a just though trite observation that victorious Rome was herself subdued by the Arts of Greece.

(b) Next to being right in this world, the best of all things is to be clearly and definitely wrong.

(c) Falstaff has done an immense deal to alleviate misery and promote positive happiness. What more can be said of your heroes and philanthropists ?

3. *Either*, Amplify and explain Lamb's remarks about 'the fine old race of Pedagogues'—'They were always in their first garden, reaping harvests of their golden time, among their *Flori* and their *Spicilegia*, in Arcadia still, but kings'.

Or, How does Ruskin bring out the difficulty of addressing an audience without knowing whether they believed or did not believe in any other world than this ? Explain the significance of the title 'Crown of Wild Olive' used by Ruskin.

Or, Give some account of the splendour and magnificence of the Roman Empire in the age of the Antonines.

Or, What glimpses of domestic life and of religious belief of the Japanese do we get in Hearn's Essay ?

4. *Either*, Examine the correctness of the following :—

'Among all the brilliant examples of the triumph of the imagination over time, Esmond has few equals ; and of the numerous great instances of the successful quickening of a dead past into life by the spirit of fiction, it is excelled by none'.

Or, 'There are two heroines who equally command our sympathy—Lady Castlewood, and her daughter Beatrix.' Discuss.

5. Answer *one* of the following :—

(a) 'The Book of Job is an attempt to grapple with the problem of human suffering.' Does Job agree with the contention of his friends that his calamities are the evidence and consequence of sin ?

(b) Explain and illustrate from your text :—The reader will always find something in the Psalms in sympathy with his own spiritual state. They are as comprehensive as the human soul and varied as human life ; they treat not life after the fashion of on age or people, but life in its rudiments'.

Third Paper

1. Give the substance of *one* of the following passages :—

(a) There are some books, when we close them,—one or two in the course of our life,—difficult as it may be to analyse or ascertain the cause, our minds seem to have made a great leap. A thousand obscure-things receive light ; a multitude of indefinite feelings are determined. Our intellect grasps and grapples with all subjects with a capacity, a flexibility, and a vigour before unknown to us. It masters questions hitherto perplexing, which are not in touch or referred to in the volume just closed: What is the magic ? Is it the spirit of the supreme author, by a magnetic influence blending with our sympathizing intelligence, that directs or inspires it ? By that mysterious sensibility, we extend to questions which he has not treated the same intellectual force which he has exercised over those which he has expounded. His genius for a time remains in us. 'Tis the same with human being as with book. All of us encounter, at least once in our life, some individual who utters words that make us think for ever. There are men whose phrases are oracles ; who condense in a sentence the secrets of life ; who blurt out an aphorism that forms a character or illustrates an existence.

(b) It was sublime humanity, it was forbearance and selfdenial which even the immortal gods have never shown us. He could endure to perish by those torments which alone are both acute and slow ; he could number the steps of death and miss not one ; but he could never see thy tears nor let thee see his. O weakness above all fortitude ! Glory to the man who rather bears a grief corroding his breast than permits it to prowl beyond, and to prey on the tender and compassionate ! Women commiserate the brave, and men the beautiful. The dominion of pity has usually this extent, no wider. Thy father was exposed to the obloquy not only of the malicious, but also of the ignorant and thoughtless who condemn in the unfortunate what they applaud in the prosperous. There is no shame in poverty or in slavery, if we neither make ourselves poor by our improvidence nor slaves by our venality. The lowest and the highest of the human race are sold : most of the intermediate are also slaves, but slaves who bring no money into the market.

2. Give the substance of *one* of the following poems :—

- (a) All the means of action—
 The shapeless masses—the materials—
 Lie everywhere about us. What we need
 Is the celestial fire to change the flint
 Into transparent crystal, bright and clear.
 That fire is genius ! The rude peasant sits
 At evening in his smoky cot, and draws
 With charcoal uncouth figures on the wall.
 The son of genius comes, footsore with travel,
 And begs a shelter from the inclement night.
 He takes the charcoal from the peasant's hand
 And, by the magic of his touch at once
 Transfigured, all its hidden virtues shine
 And, in the eyes of the astonished clown,
 It gleams a diamond ! Even thus transformed,
 Rude popular traditions and old tales
 Shine as immortal poems, at the touch
 Of some poor, houseless, homeless, wandering bard,
 Who had but a night's lodgings for his pains.
- (b) Sunset and evening star,
 And one clear call for me !
 And may there be no moaning of the bar.
 When I put out to sea,
 But such a tide as moving seems asleep,
 Too full for sound and foam.
 When that which drew from out the boundless deep
 Turns again home.
 Twilight and evening bell,
 And after that the dark !
 And may there be no sadness of farewell.
 When I embark :
 For tho' from out our bourne of Time and Place
 The flood may bear me far,
 I hope to see my Pilot face to face
 When I have crossed the bar

2. Write an essay on *one* of the following subjects :—

- (a) India's contribution to world culture.
 (b) Truth is greater than consistency.
 (c) Your favourite novelist.
 (d) The trials and tribulations of student life.
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ENGLISH—PASS

First Paper

Q. 1. Either, Discuss Shakespeare's use of the super-natural in *Julius Caesar*.

Or, Write a short note on the 'citizens' of ancient Rome, as depicted in *Julius Caesar*; and show that they represent rather an Elizabethan mob than the *plebs* of Roman history.

Q. 2. Either, Illustrate Brutus's stoicism, Cassius's epicureanism, and Casca's cynicism. Show that under stress of circumstances these personages are sometimes led to act contrary to their philosophical tenets.

Or, Sketch the character of Hotspur. Why is he called 'an epic hero'?

Q. 3. Either, How is Prince Henry's final transformation foreshadowed in *King Henry the Fourth, Part I*?

Or, Point out (briefly) the salient features in the characters of any two of the following;—(a) Douglas, (b) Glendower, (c) Lady Percy.

Q. 4. Either, What are the moral and spiritual lessons inculcated by the idyll of *The Holy Grail*? Is the idyll deficient in unity?

Or, Narrate (briefly) the story of *The Sick King in Bokhara*, and add a short note on the character of the King.

Q. 5. Explain any four of the following passages:—

(a) They wound my thoughts worse than thy sword my flesh;
But thought's the slave of life, and life time's fool;
And time, that takes survey of all the world,
Must have a stop.

(b) A barren spirited fellow; one that feeds
On abjected orts, and imitations.
Which, out of use and staled by other men,
Begin his fashion; do not talk of him,
But as a property.

(c) *Falstaff*. Indeed, you come near me now, Hal; for we that take purses go by the moon and the seven stars, and not by Phoebus, he 'that wandering knight so fair'. And, I prithee, sweet wag, when thou art king, as, God save thy grace—majesty I should say for grace thou wilt have none,—

Prince. What, none?

Falstaff. No, by my troth, not so much as will serve to be prologue to an egg and butter.

- (d) For he who hath in turn run through
 All that was beautiful and new,
 Hath nought to hope, and not to leave ;
 And, save the future, (which is view'd
 Not quite as men are base or good,
 But as their nerves may be endued.)
 With nought perhaps to grieve.
- (e) O hateful error, melancholy's child,
 Why dost thou show to the apt thoughts of men
 The things that are not ? O error soon conceived.
 Thou never comest unto a happy birth,
 But kill'st the mother that engender'd thee !
- (f) Said Hoseyn : God gives each man one life, like a lamp, then
 gives
 That lamp due measure of oil : lamp lighted—hold high, wave
 wide.
 Its comfort for others to share ! once quench it, what help is
 left.
 The oil of your lamp is your son : I shine while Muleykeh lives.
 Would I beg your son to cheer my dark if Muleykeh died ?
 It is life against life : what good avails to to the life bereft ?

Second Paper

Q. 1. Answer **one** question from *either* Group A or Group B :—

GROUP A

(a) 'Pitt ruled during the convulsion of a new birth at the greatest epoch in history since the coming of Christ, and was on the whole not unequal to it'.

Do you agree with the opinion expressed above ? Give reasons for your answer.

(b) 'Had it not been for Fox's character and its faults Pitt could certainly not have retained, and possibly could not have obtained, the premiership'.

Bring out the principal distinguishing features in the character of Pitt and Fox, and justify, if possible, the remarks quoted above.

GROUP B

(a) 'Burke will always be read with delight and edification, because in the midst of discussions on the local and the accidental, he scatters apophthegms that take us into the regions of lasting wisdom.'

Discuss and justify, if possible, the remarks quoted above, giving reference to Burke's Letters to the Sheriff of Bristol.

(b) Write a short note on Burke as a practical politician, illustrating your answer by references to his remarks on the true end of legislature and his defence of party.

Q. 2. Explain, with reference to the context, *any two* of the following passages—the two passages must be selected from one of the two groups :—

Group A

(a) 'I will not barter English commerce for Irish slavery; that is not the price I would pay, nor is the thing I would purchase.'

(b) While he watched over the Treasury like Sully, he conducted his own affairs like Charles Surface.

(c) 'Europe is not to be saved by any single man. England has saved herself by her exertions and will, as I trust, save Europe by her example.'

Group B

(a) General rebellions and revolts of a whole people never were encouraged now or at any time. They were always provoked.

(b) Civil freedom is not, as many have endeavoured to persuade you, a thing that lies hid in the depth of abstruse science,

(c) We are not too nicely to scrutinize motives as long as action is irreproachable. It is enough (and for a worthy man perhaps too much) to deal out its infamy to convicted guilt and declared apostasy.

Q. 3. Answer *any one* of the following :—

(a) Explain and illustrate from the essay read by you : 'The cardinal doctrine which runs through all the teaching of Ruskin is that men—men and not the works of men, men and not the materials, or machines, or gold or even pictures or statues or public building—should be the prime object of our care, and reverence, and love.'

(b) 'The strength of Japan, like the the strength of her ancient faith need little material display : both exist where the deepest real power of any great people exists,—in the Race Ghost.'

Discuss in brief how Lafcadio Hearn attempts to justify this opinion.

(c) Discuss Huxley's views about purely literary education. Do you consider the scheme outlined by him in the Essay studied by you to be feasible and practicable in this country ?

Q. 4. Answer *one* question from *either* Group A or Group B :—

Group A

(a) In *A Tale of Two Cities* the weight is laid on situation and incident—the interest pounding the characters in its own mortar and beating their interest out of them.

Discuss.

(b) Whom do you consider to be the hero in *A Tale of Two Cities*? Give reasons for your answer.

Group B

(a) 'There are few productions in the world of fiction which exhibit the finish of *Esmond*, for the author has not only drawn his characters with unusual skill, but delighted the reader with repeated bursts of natural, unaffected eloquence, in language sedulously borrowed from the age of Steele and Addison.'

Discuss.

(b) Do you agree with the following opinion expressed about *The History of Henry Esmond*?—

'The interest of the story to artists, and I venture to think to the reader as well, centres in Beatrix and her mother, with Esmond between the two, like Garrick between comedy and tragedy.

Give reasons for your answer.

Q. 5. 'It is clear that many of them (the Psalms) are intended to express the feelings and aspirations of the faithful community and of the struggling and suffering Jewish nation.' *Elucidate*.

Or,

Write a short note on the teachings sought to be conveyed in the Book of Job.

Q. 6. Explain, with reference to the context, any three of the following, taking at least one from each group:—

Group A

(a) The superstition of the people was not embittered by any mixture of theological rancour; nor was it confined by the chains of any speculative system.

(b) Had he asked of me, what song the Sirens sang, or what name Achilles assumed when he hid himself among women, I might, with Sir Thomas Browne, have hazarded a 'wide solution.'

(c) But we may say of him, as Byron says of Venice, that his very vices are of the gentler sort.

Group B

(a) Are thy days as the days of man? Are thy years as man's days, that thou inquirest after mine iniquity, and search after my sin?

(b) But indeed, at that time, putting to death was a recipe much in vogue with all trades and professions, and not least of all with Tellsons.

(c) It is an error, surely, to talk of the simplicity of youth. think no persons are more hypocritical, and have a more affected behaviour to one another, than the young. They deceive themselves and each other with artifices that do not impose upon men of the world ; and so we get to understand truth better, and grow simpler as we grow old.

ENGLISH—PASS

Third Paper

Q. 1. Give the substance of *one* of the following passages :—

(a) Among the many who have enforced the duty of giving, I am surprised there are more to inculcate the ignominy of receiving ; to show that by every favour we accept, we in some measure forfeit our native freedom ; and that a state of continual dependence on the generosity of others is a life of gradual debasement.

Were men taught to despise the receiving of obligations with the same force of reasoning and declaration that they are instructed to confer them, we might then see every person in society filling up the requisite duties of his station with cheerful industry, neither relaxed by hope, nor sullen from disappointment.

Every favour a man receives in some measure sinks him below his dignity ; and, in proportion to the value of the benefit, or the frequency of its acceptance, he gives up so much of his natural independence. He, therefore, who thrives upon the unmerited bounty of another, if he has any sensibility, suffers the worst of servitude : the shackled slave may murmur without reproach, but the humble dependant is taxed with ingratitude upon every symptom of discontent ; the one may rave round the walls of his cell, but the other lingers in all the silence of mental confinement. To increase his distress, every new obligation but adds to the former load, which kept the vigorous mind from rising ; till at last, elastic no longer, it shapes itself to constraint, and puts on habitual servility.

It is thus with a feeling mind : but there are some who, born without any share of sensibility, receive favour after favour, and still cringe for more ; who accept the offer of generosity with as little reluctance as the wages of merit, and even make thanks for past benefits an indirect petition for new ; such, I grant, can suffer no debasement from dependence, since they were originally as vile as was possible to be ; dependence degrades only the ingenuous, but leaves the sordid mind in pristine meanness. In this manner, therefore, long continued generosity is misplaced, or it is injurious ; it either finds a man worthless or it makes him so ; and true it is, that the person who is contented to be often obliged, ought not to have been obliged at all.

(b) In a community of hunters or of shepherds, every man easily and necessarily becomes a soldier. His ordinary avocations are perfectly compatible with all the expedition on which he is bound, he finds it easy to transport with him the stock from which he derives his subsistence. The whole people is an army; the whole year a march. Such was the state of society which facilitated the gigantic conquests of Attila and Tamerlane. But a people which subsists by the cultivation of the earth is in a very different situation. The husbandman is bound to the soil on which he labours.* A long campaign would be ruinous to him. Still his pursuits are such as give to his frame both the active and the passive strength necessary to a soldier. Nor do they, at least in the infancy of agricultural science, demand his uninterrupted attention. At particular times of the year he is almost wholly unemployed and can, without injury to himself, afford the time necessary for short expedition. Thus the legions of Rome were supplied during its earlier wars. The season during which the fields did not require the presence of the cultivators sufficed for a short inroad and a battle. These operations, too, frequently interrupted to produce decisive results, yet served to keep among the people a degree of discipline and courage which rendered them not only secure, but formidable. The archers and hillmen of the middle ages who, with provisions for forty days at their backs, left the fields for the camp, were troops of the same description.

Q. 2. Give the substance of one of the following poems :—

(a) *At His Father's Tomb*

But thou would' st not *alone*
Be saved, my father ! alone
Conquer and come to thy goal,
Leaving the rest in the wild.
We were weary, and we
Fearful, and we, in our march,
Fain to drop down and to die.
Still thou turnedst, and still
Beckonedst the trembler, and still
Gavest the weary thy hand !
If, in the paths of the world,
Stones might have wounded thy feet,
Toil or dejection have tried
Thy spirit, of that we saw
Nothing ! to us thou wert still
Cheerful, and helpful, and firm.
Therefore to thee it was given
Many to save with thyself ;

- And, at the end of thy day,
 O faithful shepherd ! to come,
 Bringing thy sheep in thy hand,
- (b) Break, break, break,
 On thy cold grey stones, O Sea !
 And I would that my tongue could utter
 The thoughts that arise in me.
 O well for the fisherman's boy,
 That he shouts with his sister at play !
 Oh well for the sailor lad,
 That he sings in his boat on the bay
 And the stately ships go on
 To their haven under the hill ;
 But O for the touch of a vanish'd hand,
 And the sound of a voice that is still
 Break, break, break,
 At the foot of thy crags, O Sea !
 But the tender grace of a day that is dead
 Will never come back to me.

Q. 3. Write an essay on **one** of the following subjects

- (a) An ideal university.
 (b) Aviation in peace and war.
 (c) 'Travel is a part of education' (BACON).

1936

ENGLISH—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable

1. *Either*, 'The drama (*The merchant of Venice*) is impregnated, in an inimitable manner, with a thoroughly Italian air, with an aroma of Italy.....' Illustrate.

Or, Give the substance of Portia's descriptions of her suitors, pointing out instances of her wit.

2. *Either*, Discuss the character of Julius Caesar as portrayed by Shakespeare, and indicate some of the points in which the dramatist deviates from history.

Or, Give the substance of the funeral speech delivered by Antony and point out the various devices by which he incites the mob against the conspirators.

3. *Either*, Sketch the character of Shylock. Do you regard him as a man 'more sinned against than sinning'?

Or, Contrast the characters of Brutus and Cassius.

4. *Either*, Give the substance of Wordsworth's *Ode on Intimations of Immortality*, and add a short critical note on the poem.

Or, Give an analysis of Shelley's poem, *To a Skylark*, and compare it with Wordsworth's poem on the same subject.

Or, Write a critical estimate of *Mazeppa's Ride* as a narrative poem and show that it illustrates Byron's wonderful power of vividly conceiving a single incident, and making us see and feel it too.

Or, Point out the differences in the five visions of the Grail, and show how they correspond to differences of personality.

5. Explain any four of the following passages :—

(a) Look, how the floor of heaven
Is thick inlaid with patines of bright gold :
There's not the smallest orb which thou behold'st
But in motion like an angel sings,
Still quiring to the young-eyed cherubins ;
Such harmony is in immortal souls ;
Cut whilst this muddy vesture of decay
Doth grossly close it in, we cannot hear it.

(b) Thou wast not born for death, immortal Bird !
No hungry generations tread thee down ;
The voice I hear this passing night was heard
In ancient days by emperor and clown :
Perhaps the self-same song that found a path
Through the sad heart of Ruth, sick for home,
She stood in tears amid the alien corn.

(c) Now he goes,
With no less presence, but with much more love,
Than young Alcides, when he did redeem
The virgin tribute paid by howling Troy
To the sea-monster : I stand for sacrifice ;
The rest aloof are the Dardanian wives,
With bleared visages, come forth to view
The issue of the exploit.

(d) Why should I relate
That objects which the Shepherd loved before
Were dearer now ? that from the Boy there came
Feelings and emanations—things which were
Light to the sun and music to the wind ;
And that the old Man's heart seemed born again ?

- (e) Even by the rule of that philosophy
 By which I did blame Cato for the death
 Which he did give himself—I know not how,
 But I do find it cowardly and vile,
 For fear of what might fall, so to prevent
 The time of life—arming myself with patience,
 To stay the providence of some high powers,
 That govern us below.
- (f) Thy soul was like a Star, and dwelt apart :
 Thou had'st a voice whose sound was like the sea,
 Pure as the naked heavens, majestic, free ;
 So didst thou travel on life's common way
 In cheerful godliness ; and yet thy heart
 The lowliest duties on herself did lay.
- (g) Here wast thou bay'd, brave hart,
 Here didst thou fall ; and here the hunters stand,
 Sign'd in thy spoil, and crimson'd in thy lethe.
 O world, thou wost the forest to this hart ;
 And this, indeed, O world, the heart of thee.
- (h) It was no dream : or say a dream it was,
 Real are the dreams of Gods, and smoothly pass
 Their pleasures in a long immortal dream.

ENGLISH—PASS

Second Paper

Candidates are required to give their answers in their own words as far as practicable.

1. *Either, (a) What is your opinion about A Tale of Two Cities as a work of fiction ? Consider its place among Dickens's literary works.*

Or, (b) "There is not a grander, loftier figure than the self-wrecked, self-devoted Sydney Carton in literature or history." Discuss this statement, unfolding the part played by Sydney Carton in the development of the story

2. *Either, (a) Write a critical estimate of Pitt's policy in relation to the French Revolution.*

Or, (b) Write a commentary on the political relations between Fox and Pitt.

3. *Either, (a) illustrate from Lamb's essay on The old and the New Schoolmaster the characteristics of his style as a humorist.*

Or, (b) Give some account of the Franciscan movement, and explain why Tennyson says :—

'Sweet St. Francis of Assisi, would that he were here again !'

Or, (c) What, according to Frederic Harrison, are the two different answers generally given to the question, 'What is the use of historical knowledge?', and what is the answer he gives?

Or, (d) What, according to Lafcadio Hearn, makes it impossible for the man of the West to discern 'the true colour of Japanese life'?

How do he illustrate the remark, 'We construct for endurance, the Japanese for impermanency'?

4. *Either* (a) How does Job repel the suggestions of his friends as to the cause and significance of his afflictions?

Or, (a) Discuss the place of the *Book of Proverbs* in the *Wisdom Literature* of the Jews.

5. Explain any four of the following, stating fully the context in each case:—

(a) Perhaps! Perhaps, see the great crowd of people with its rush and road bearing down upon them, too!

(b) 'I am the resurrection and the life,' saith the Lord 'he that believeth in Me, though he were dead, yet shall he live, and whosoever liveth and believeth in Me, shall never die.'

(c) It is the sneer of a worshipper burning the idol which he thinks has betrayed him and attempting to warm himself at the fire.

(d) 'Roll up that map,' he said, 'it will not be wanted these ten years.'

(e) The old rider frankly quartered himself on the publican for the night:—the modern one merely makes his lance into an iron spike, and persuades his host to buy it.

(f) 'Truth came out of error much more rapidly than it came out of confusion.'

6. Annotate any One of the following:—

(a) Vanity of vanities, said the preacher, vanity of vanities; all is vanity.

(b) Awake and sing, ye that dwell in dust? for the dew is as the dew of herbs, and the earth shall cast out the dead.

(c) Then shalt thou call, and the Lord shall answer; thou shalt cry, and He shall say, Here I am.

(d) Happy is the man that findeth wisdom, and the man that getteth understanding.

ENGLISH—PASS

• THIRD PAPER

Candidates are required to give their answer in their own words as far as practicable

1. Give the substance of One of the following passages:—

(a) Another kind of calumny is by instilling sly suggestions, which

although they do not downrightly assert falsehoods, yet they breed sinister opinions in the hearers, especially in those who, from weakness or credulity, from jealousy or prejudice, from negligence or inadvertency, are prone to entertain them. This is done in many ways : by propounding wily suppositions, shrewd insinuations, crafty questions, and specious comparisons, intimating a possibility, or inferring some likelihood of, and thence inducing to believe the fact. 'Doth not,' saith this kind of slanderer, 'his temper incline him to do thus ? may not his interest have swayed him thereto ? had he not fair opportunity and strong temptation to it ? hath he not acted so in like cases ? Judge you therefore, whether he did it or not.' Thus the close slanderer argue ; and a weak or prejudiced person is thereby so caught that he presently is ready thence to conclude the thing done. Again : 'He doeth well,' saith the sycophant, 'it is true ; but what and to what end ? Is it not, as most men do, out of ill design ? may he not dissemble now may he not recall hereafter ? have not others made as fair a show ? yet we know what came of it.' Thus do calumnious tongues pervert the judgments of men to think ill of the most innocent, and meanly of the worthiest actions. Even commendation itself is often used calumniously, with intent to breed dislike and ill-will towards a person commended in envious or jealous ears ; or so as to give passage to dispraises, and render the accusations following more credible. 'Tis an artifice commonly observed to be much in use there, where the finest tricks of supplanting are practised, with greatest effect ; there is no more pestilent enemy than a malevolent praiser. All these kinds of dealing, as they issue from the principles of slander, and perform its work, so they deservedly bear the guilt thereof.

(b) And lastly, I can conceive a still loftier flight of humanity—a man, the aspiring of whose heart for the good of man knows no limitations—whose longings, and whose conceptions on this subject, overleap all the barriers of geography—who, looking on himself as a brother of the species, links every spare energy which belongs to him with the cause of its amelioration—who can embrace within the grasp of his ample desires the whole family of mankind—and who, in obedience to a heaven-born movement of principle within him separates himself to some big and busy enterprise, which is to tell on the moral destinies of the world. Oh ! could such a man mix up the softenings of private virtue with the habit of so sublime a comprehension—if, amid those magnificent darings of thought and of performance, the mildness of his benignant eye could still continue to cheer the retreat of his family, and to spread the charm and the sacredness of piety among all its members—could he even mingle himself, in all the gentleness of a soothed and a smiling heart, with the playfulness of his children—and also find strength

to shed blessings of his presence and his counsel over the vicinity around him ; oh ! would not the combination of so much grace with so much loftiness, only serve the more to aggrandize him ? Would not the one ingredient of a character so rare go to illustrate and to magnify the other ? And would not you pronounce him to be fairest specimen of our nature who could so call out all your tenderness while he challenged and compelled all your veneration ?

2. Give the substance of **one** of the following pieces :—

(a) *Hunger*

I come among the peoples like a shadow.
 I sit down by each man's side.
 None sees me, but they look at one another,
 And know that I am there.
 My silence is like the silence of the tide
 That buries the playground of children ;
 Like the deepening of frost in the slow night,
 When birds are dead in the morning.
 Armies trample, invade, destroy,
 With guns roaring from earth and air.
 I am more terrible than armies.
 I am more feared than the cannon.
 Kings and chancellors give commands ;
 I give no command to any ;
 But I am listened to more than kings
 And more than passionate orators.
 I unswear words, and undo deeds.
 Naked things know me—
 I am first and last to be felt of the living—
 I am Hunger.

(b) *Outlook*

Not to be conquered by these headlong days,
 But to stand free : to keep the mind at brood
 On life's deep meaning, nature's altitude
 Of loveliness, and time's mysterious ways ;
 At every thought and deed to clear the haze
 Out of our eyes, considering only this,
 What man, what life, what love, what beauty is.
 This is to live, and win the final praise.
 Though strife, ill fortune, and harsh human need
 Beat down the soul, at moments blind and dumb
 With agony ; yet, patience—there shall come
 Many great voices from life's outer sea,
 Hours of strange triumph, and, when few men heed,
 Murmurs and glimpses of eternity.

3. Write an essay on one of the following subjects :—
- Nature as teacher.
 - Literary versus scientific education.
 - Literature as an index of the national character.
 - The profession you intend to enter and the reasons for your choice.

1937

ENGLISH—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable.

1. **Either**, Give your own interpretation of the character of Macbeth. (Consider in this connexion the speeches—'Yet do I fear thy nature, &c.' and 'If it were done when 'tis done, &c.')

Or, Write a short essay on the Witches in *Macbeth*, indicating clearly the part played by them in the drama.

2. **Either**, Give an analysis of the Trial scene in *The Merchant of Venice*, indicating how 'precise legal justice is often gross injustice'.

Or, 'I hold the world hut as the world, Gratiano ;
A stage where every man must play a part,
And mine a sad one.'

How far does this speech help you to understand the character and temperament of the speaker ?

3. **Either**, It has been thought that Shakespeare 'wrote *The Merchant of Venice* with a distinct moral purpose in view—that it might serve as 'a plea for toleration'. Discuss.

Or, What is Macbeth's estimate of Banquo's character ? How far is the estimate justified by Banquo's conduct in the course of the play ?

4. Give an analysis of **Either** *Ode to the West Wind* (Shelly), **Or** *Ode to Duty* (Wordsworth), and add a critical appreciation of the poem you select for analysis.

5. Explain any **four** of the following passages :—

(a) *Lady Macbeth.*

But in them nature's copy is not eterne.

Macbeth.

There's comfort yet ; they are assailable :
Then be thou jocund. Ere the bat hath flown
His cloister'd flight, ere to black Hecate's summons
The shard-borne beetle with his drowsy hums
Hath rung night's yawning peal, there shall be done
A deed of dreadful note.

Jes. In such a night
Medea gather'd the enchanted herbs.
That did renew old Æson.

ENGLISH—PASS

Second Paper

Candidates are required to give their answers in their own, words as far as practicable.

Answer not more than six questions, four from GROUP A, of which Question 6 must be one, and two from GROUP B, of which Question 3 must be one.

GROUP A

1. Give some account of the state of England and of France on the eve of the French Revolution.
2. Describe the trial of Charles Darney before the Tribunal.
3. 'A poet's soul must contain the perfect shape of all things good, wise and just.' Show how Milton attempted to achieve this ideal in his own life.
4. Give a brief sketch of Stevenson's character.
5. Discuss briefly the claims of the study of Art and of Science as instruments of intellectual discipline.
6. Explain any three of the following, with reference to the context where necessary :—
 - (a) The virtues of a metaphysician are the vices of a historian.
 - (b) It was not temple made with hands, but the living Church that needed raising.
 - (c) And were I the chooser, a dram of well-doing should be preferred before many times as much the forcible hindrance of evil doing.
 - (d) Intellect may be imparted but not each man's intellectual frame.
 - (e) I would rather be a wood-cutter, or the meanest hind that all day 'sweats in the eye of Phoebus, and at night sleeps in Elysium than wear out my life so, 'twixt dreaming and awake.'

GROUP B

1. The Psalms are as comprehensive as the human soul, and varied as human life. Elaborate this statement.
2. Briefly state the main them of the *Book of Revelation*.
3. Annotate any one of the following passages:—
 - (a) Yea, though I walk through the valley of the shadow of death, I will fear no evil : for thou art with me ; thy rod and thy staff they comfort me.

(Or, For though I should walk in the midst of the shadow of death, I will fear no evils, for thou art with me).

(b) Remember, O Lord, the children of Edom in the day of Jerusalem ; who said, Rase it, rase it, even unto the foundation thereof.

(Or, Remember, O Lord, the children of Edom, in the day of Jerusalem :

Who say : Rase it, rase it, even to the foundation thereof).

(c) And God said to him : That his seed should sojourn in a strange country, and that they should bring them under bondage, and treat them evil four hundred years.

(d) Better is an handful with quietness, than both the hands full with travail and vexation of spirit.

(Or, Better is a handful with rest, than both hands full with labour, and vexation of mind).

ENGLISH—PASS

THIRD PAPER

Candidates are required to give their answers in their own words as far as practicable.

1. Express in your own words the substance of one of the following passages :—

(a) I wish that the reader, before I bring him into St. Mark's Place, would imagine himself for a little time in a quiet English cathedral town, and walk with me to the West front of its Cathedral. Let us go together up the more retired street, at the end of which we can see the pinnacles of one of the towers, and then through the low grey gateway, with its battlemented top and small latticed window in the centre, into the inner private-looking road or close were nothing goes in but the carts of the tradesmen who supply the bishop and the Chapter, and where there are little shaven grass plots, fenced in by neat rails, before old-fashioned groups of somewhat diminutive and excessively trim houses, with little oriel and bay windows jutting out here and there, and deep wooden cornices and eaves painted cream colour and white, and small porches to their doors in the shape of coskles-shells, or little, crooked, thick, indescribable wooden gables, warped a little on one side : and so forward till we come to larger houses, also old-fashioned, but of red brick, and with gardens behind them, and fruit walls, which show here and there, among the nectarines, the vestiges of an old cloister arch or shaft, and looking in front on the Cathedral Square itself, laid out in rigid divisions of smooth grass and gravel walk, yet not uncheerful

specially on the sunny side where the Canon's children are walking with their nursery-maids. And so, taking care not to tread on the grass, we will go along the straight walk to the West front, and there stand for a time, looking up at its deep pointed perches and the dark places between their pillars where there were statues once, and where the fragments here and there of a stately figure are still left, which has in it the likeness of a king, perhaps indeed a king on earth, perhaps a saintly king long ago in heaven ; and so higher and higher up the great mouldering wall of rugged sculpture and confused arcades, shattered and grey, and grisly with heads of dragons, and mocking friends, worn by the rain and swirling winds into yet unseemlier shape, and coloured on their stony scales by the deep russet orange lichen melancholy gold.

(b) So far from science being irreligious, as many think, it is the neglect of science that is irreligious—It is the refusal to study the surrounding creation that is irreligious. Take a humble simile. Suppose a writer were daily saluted with praises couched in superlative language. Suppose the wisdom, the grandeur, the beauty of his works, were the constant topics of the eulogies addressed to him. Suppose those who unceasingly uttered these eulogies on his works were content with looking at the outsides of them ; and had never opened them, much less tried to understand them. What value should we put upon their praises ? What should we think of their sincerity ? Yet, comparing small things to great, such is the conduct of mankind in general, in reference to the Universe and its Cause, Nay, it is worse. Not only do they pass by without study these things which they daily proclaim to be so wonderful ; but very frequently they condemn as mere triflers those who give time to the observation of Nature—they actually scorn those who show any active interest in these marvels. We repeat, then, that not science but the neglect of science, is irreligious. Devotion to science is a tacit worship—a tacit recognition of worth in the things studied ? and by implication in their Cause. It is not a mere lip-homage, but a homage expressed in actions—not a mere professed respect but a respect proved by the sacrifice of time, thought and labour. Nor is it thus only the true science is essentially religious. It is religious too in as much as, it generates a profound respect for, and an implicit faith in, those uniformities of action which all things disclose. By accumulated experiences the man of science acquires a thorough belief in the unchanging relations of phenomena in the invariable connexion of cause and consequence—in the necessity of good or evil results. Instead of the rewards and punishments of traditional belief, which people vaguely hope they may gain, or escape, spite of their disobedience, he finds that there are rewards and punishment in the ordained construction of things ; and that the evil results of

disobedience are inevitable. He sees that the laws to which we must submit are both inexorable and beneficent. He sees that in conforming to them the process of things is ever towards a greater perfection and a higher happiness. Hence he is led constantly to insist on them, and is indignant when they are disregarded. And thus does he, by asserting the eternal principles of things and the necessity of obeying them, prove himself intrinsically religious.

2. Express fully the meaning of either of the two following passages :—

(a) *Afterwards*

When the Present has latched its postern behind my tremulous
stay,

And the May month flaps its glad green leaves like wings,
Delicate-filmed as new-spun silk, will the neighbours say,

‘He was a man who used to notice such things?’

If it be in the dusk when, like an eyelid’s soundless blink,

The dewfall hawk comes crossing the shades to alight

Upon the wind-warped upland thorn a gazer may think,

‘To him this must have been a familiar sight’.

If I pass during some nocturnal blackness, mothy and warm,

When the hedgehog travels furtively over the lawn,

One may say, ‘He strove that such innocent creatures should
come to no harm,

But he could do little for them ; and now he is gone.’

If, when hearing that I have been stilled at last, they stand at
the door,

Watching the full-starred heavens that winter sees.

Will this thought rise on those who will meet my face no more,

‘He was one who had an eye for such mysteries?’

And will any say when my bell of quittance is heard in the
gloom,

And a crossing breeze cuts a pause in its outrollings.

Till they rise again, as they were a new bell’s boom,

He hears it not now, but used to notice such things?’

(b) *To Milton—Blind*

He who said suddenly, ‘Let there be light!’

To thee the dark deliberately gave ;

That those full eyes might undistracted be

By this beguiling show of sky and field,

This brilliance, that so lures us from the Truth ;

He gave thee back original night, His own

Tremendous canvas, large and blank and free,

Where at each thought a star flashed out and sang
 O blinded with a special lightning, thou
 Had'st once again the virgin Dark ! and when
 The pleasant flowery sight, which had deterred
 Thine eyes from seeing, when this recent world
 Was quite withdrawn ; then burst upon thy view
 The elder glory ; space again in pangs,
 And Eden odorous in the early mist,
 That heaving watery plain that was the world ;
 Then the burned earth, and Christ coming in clouds
 Or rather a special leave to thee was given
 By the high power, and thou with bandaged eyes
 Wast guided through the glimmering camp of God.
 Thy hand was taken by angels who patrol
 The evening or are sentries to the dawn,
 Or pace the wide air everlastingly,
 Thou wast admitted to the presence, and deep
 Argument heardest, and the large design
 That brings this world out of the woe to bliss.

STEPHEN PHILLIPS

3. Write an essay on **one** of the following subjects :—

- (a) Optimism.
- (b) The place of literature in Education.
- (c) 'Life is action, not contemplation' (GOETHE).

1909

SANSKRIT—PASS

First Paper

Paper-Setters— { D. G. Thibaut, C. I. E. Ph. D., D. SC.
 Mahamahopadhyay Satish Chandra
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1. Explain any two of the following Stanzas in Sanskrit :—

- (a) প্রলীনভূপালমপি স্থিরায়তি
 প্রশাসদাবারিধি মণ্ডলং ভুবঃ ।
 স চিন্তয়তোব ভিন্নস্ব স্বদেশতীর-
 অহো দুঃখা বলবধিরোধিতা ॥

- (b) ন সমরে পরিরক্ষণং ক্ষমং তে
 নিকৃতিপরেষু পরেষু ভূরিধারঃ ।
 অরিষু হি বিজয়ার্ধিনঃ ক্রিতীশা
 বিদধতি সোপাধি সংবিদূষণানি ॥
- (c) বিবমোহপি বিগাহতে নরঃ
 কৃততীর্থঃ পরসামিবাশয়ঃ ।
 স কু তত্র বিশেষ দুর্লভঃ
 সদুপভুক্ততি কৃত্যবস্তু যঃ ॥
- (d) অমুরপুংগবস্তি বিগ্রহঃ
 প্রভুমন্তঃ প্রকৃতি প্রকোপজঃ ।
 অখিলং হি হিনন্তি ভূধরং
 তরুশাখাস্ত নিবৰ্জজোহনলঃ ॥

2. Scan stanza (b) in the above.

3. Translate any three of the following Stanzas into English :—

- (a) ভবাদৃশেষু অমদাজনোদিতং
 ভবত্যাধিক্ষেপ ইবাশুশাসনম্ ।
 তথাপি বক্তং ব্যবসায়মস্তি মাং
 নিরন্তনারীসময়া হুরাধয়ঃ ॥
- (b) ব্রজস্তি তে মুচুধিয়ঃ পরাভবং
 ভবন্তি মায়াবিষু যে ন মায়িনঃ ।
 এবিস্ত হি স্তস্তি শঠাস্তথাবিধান্
 অসংবৃত্তাকান্নিশিতা ইবেষবঃ ।
- (c) ইয়মিষ্টপুণ্য রোচতাং
 রুচিরার্থা ভবতেহপি ভারতী
 নমুসকৃৎবিশেষবিন্ধুহা
 গুণগৃহা বচনে বিপশ্চিতঃ ॥
- (d) প্রতমপ্যাধিগম্য যে রিপুন্
 বিনয়ন্তে নঃ শরীর জয়নঃ ।

জননন্ত্য চিরাৎ সংপদাৎ

অবশন্তে বলু চাপলাশ্রয়ম্ ॥

4. Derive ভবাত্ত in (a) in the above, and account for the long vowel "a" in it. Give the different meanings of সমর। Decline the base of যুদ্ধিষ: in (b) in the 2nd, 6th and 7th cases. Conjugate the root of রুত্তি in the third person singular লঙ্ and লৃঙ্। Parse ভবতে in (c). Expound the Samasas in প্রমদাজনোদিতম্ in (a) and বক্তৃবিশেষনিষ্পৃহা in (c). Quote and explain the rule for the atmanepada suffix in বিনয়ন্তে in (d). Is the form জননন্তে grammatically correct?

5. Change the voice of the following stanza :—

স কিংসখা সাধু ন শাস্তি বোহধিপঃ

হিতায় যঃ সংশৃণুতে স কিং প্রভুঃ।

সদামুকুলেষু হি কুর্কতে রতিং

নৃপেঘমাত্যেযু চ স সংপদঃ

6. Expound the Samasa in কিংসখা in the above. Is the form কিংসখঃ correct? Give the reason for your answer. Account for the 5th case ending in হিতায় and for the atmanepada suffix in সংশৃণুতে।

7. Write explanatory notes on any three of the following Slokas in Sanskrit :—

(a) তং রাজা প্রণয়সম্যক্ ত্রিবর্গেণাভিবৰ্ধতে।

কামাত্মা বিবমঃ ক্রোড়া দণ্ডেনৈব নিহন্ততে ॥

(b) তৈঃ সাক্ষিচিন্তয়েন্নিত্যং সামান্যং সন্ধিবিশ্রহম্।

স্থানং সমুদয়ং গুপ্তিং লঙ্ প্রশমনানি চ ॥

(c) সন্ধিঃ চ বিশ্রহঃ চৈব যানমানসম্বেব চ।

বৈধীভাবং সংশ্রয়ং চ ষড়্ গুণাংশ্চিন্তয়েৎ সদা ॥

(d) সংশোধ্য ত্রিবিধং মার্গং—যড়্ ধং তলং স্বকম্।

সাংপরায়িক কল্লেন যানাদরিপয়ং শনৈঃ ॥

(e) এবং বৃন্তস্ত নৃপতে: শিলোহ্নেনাপি জীবতঃ।

বিস্তীৰ্ণ্যতে যশো লোকে তৈলবিন্দুস্রিবাভসি ॥

8. Give the substance of any three of the following Slokas in English :—

- (a) যত্রো জ্ঞানো মোহিতাকো দণ্ডশরতি ।
প্রজান্তত্র ন মুহুতি নেতা চেৎ সাধু পশুতি ॥
- (b) নান্ত ছিত্বং পরো বিদ্যাধিতাচ্ছিত্বং পরন্ত তু ।
গৃহেৎ কুর্শ ইবাদানি রক্ষেদ্বিবরমান্ননঃ ॥
- (c) সর্বোপায়ৈস্তথা কুর্যাদ্রীতিজ্ঞ পৃথিবীপতিঃ ।
বখান্তাত্তাধিকা ন স্য মিত্রোদাসীনশত্রবঃ ।
- (d) শত্রুসেবিনি মিত্রে চ গৃঢ়ে যুক্তভরো ভবেৎ ।
গত প্রতাগতে চৈব স হি কষ্টভরো রিপুঃ ॥
- (e) বতশ্চ ভয়মাশঙ্কন্ততো বিস্তারেনম্বলম্ ।
পশ্মেন চৈব ব্যুহেন নিবিশেত সদা স্বয়ম্ ॥

9. Clear the allusions in the following line :—

বেণো বিনষ্টোবিনয়ান্নহশচৈব পার্শ্বিবঃ

10. How does Kulluka interpret the following terms :—

ধবহুর্গ, উদ্ধার, উদাসীন, and দণ্ডব্যূহ ।

11. Reproduce or give the substance of Manu's remarks on the qualifications and duties of an ambassador (duta).

12. Answer one of the following :—

(a) What, according to Manu, should be the rates of tax on cattle (pasu), crops (dhanya), and meat (mamsa) respectively ?

(b) Who, according to Manu, should be exempted from paying tax, and what kind of tax should be levied on mechanics (karuka) and artisans (silpin) ?

13. Translate any two of the following extracts into Sanskrit :—

(a) In the land of Magadha there is a forest called Champakavati wherein had long lived in much affection a deer and a crow. As the deer was roaming at will, happy and fat he was descried by a certain jackal. The jackal on seeing him reflected : Ah ! how shall I contrive to get this tender meat to devour ? It may well be, if I can but obtain his confidence. Having thus reflected he drew near saying "Ah ! my friend, prosperity to thee ?" The deer replied, "Who art thou ?" He answered, "Small-wit the jackal. I live in the wood here without a friend like the dead but now that I have met a friend like

thee, I am rich in relations, and have re-entered the land of the living, I will at-once become thy attendant."

(b) One day, O Brahmana, Ruru entered an extensive forest. He saw there an old serpent of the Dundubha species lying stretched on the ground. Ruru thereupon in anger lifted up his staff even like the staff of death for the purpose of killing it. Then the Dundubha addressing Ruru said, 'I have done thee no harm, O Brahmana ! Then wherefore wilt thou slay me in anger' ? Ruru on hearing these words replied, "My wife, dear to me as life, was bitten by a snake ; upon which I made, O snake, the dreadful vow to kill every snake that I might see. Therefore, I will smite thee and thou shalt be deprived of life." "O Brahmana, the snakes that bite man are different from us. It behoveth thee not to slay Dundubha which are serpents only in name".

(c) Any thing taken without the knowledge of the owner is theft. It makes no difference whether we think the owner will not care about it or that he will never know of his loss or that it will not injure him. If the owner has not in any way consented to our taking his property, it is theft. Children ought to remember, that to take anything from their parents without their knowledge and consent is really to steal, even though the thing taken be one which their parents would have given them if they had asked for it.

SANSKRIT—PASS

Second Paper

1. Point out the excellences for which Sakuntala is regarded as the master-piece of Kalidas's genius.

Or,

Contrast the character of Chanakya and Rakshasa on the one hand, and of Chandra-Gupta and Malayaketu on the other.

2. (a) Give the sense of any one of the following stanzas in simple Sanskrit, using as few compound words as possible :—

(1) आलक्यदत्त मुकुलान् निबिडहासैर्

अवाङ्मवर्णमगीयवचः प्रवृत्तान् ।

अकाशेऽपि प्रगयिनस्तनयायहस्तौ

धन्वास्तदङ्गद्वयस्य मलिनौतवन्ति ॥

(2) संरक्षन्मणिं पद्मकरदमजलकालनकामरापि

भूभङ्गोत्प्रेतधूमः अलितामिव पुरः पिङ्गरानेज्जडा ॥

যন্তে রজস্ত রৌত্রং রসমভিনবস্তাণ্ডবে সংস্রবস্ত্যা
সংজাতোদগ্রকম্পং কথমপি ধরয়া ধারিতঃ পাদযাতঃ ॥

(b) Name and expound the samasa in the second line of the first stanza, and in the first line of the second stanza.

3. (a) Explain in English, indicating the context, any two of the first three and any two of the last three stanza quoted below :—

- (1) মেদশ্ছেদকুশোদরং লঘু ভবত্যাখানযোগাং বপুঃ
সঙ্ঘানামপি লক্ষ্যতে বিকৃতিমচ্চিহ্নং ভয়ক্রোধয়োঃ ।
উৎকর্ষঃ স চ ধর্ম্মিণাং বদিষ্যৎ সিধ্যন্তি লক্ষ্যো চলে
মিথ্যৈব ব্যাসনং বদন্তি যুগয়াসীদৃথিনোদঃ কুতঃ ।
- (2) সায়ন্তনে সর্বনকর্ম্মণি সংগ্রবৃত্তে
বেদিং হতাশনবতীং পরিতঃ প্রযন্তাঃ ।
ছায়াশ্চরন্তি বহুধা ভয়মাদধানাঃ
সংধাপয়োকপিশা পিশিতাশনানাম্ ॥
- (3) ক্ষৌমং কেনচিদিদ্মপাণ্ডুরনামাঙ্গল্যমাবিচ্ছতং
নিষ্ঠূত্যশ্চরণোপরাগমুভগো লাক্ষারসঃ কেনচিৎ ।
অস্ত্রেভ্যো বনদেবতাকরতলৈরাপর্বভাগোথিতৈর্
দন্তাস্ত্রাভরণানি তৎকিশলয়োত্তেদ প্রতিবন্ধিভিঃ ।
- (4) কর্ণেনেব বিবাক্ষনৈক পুরুষব্যাপাদিনী রক্ষিতা
হস্তং শক্তিরিবাঙ্কনং বলবতী বা চন্দ্রগুপ্তং ময়া ।
সা বিকোষিব বিকৃণ্ডপ্তহতকস্তাত্তিকশ্রেয়সে ।
হৈড়িম্বেষামিবেতা পর্বতনৃপং তদ্ব্যমোষাবধীৎ ॥
- (5) আবিত্ত্বতামুরাগাঃ ক্ষণমুদয়গিরেক্ষজিহানস্ত ভানোঃ
পত্রচ্ছাটৈঃ পুরস্তাদ্ধপবনতরবো দূরমাধেব গতা ।
এতে ভগ্নিগ্নিবৃন্তাঃ পুনরতিককুপপ্রাস্তপর্ধ্যন্তবিশেষে
প্রামো ভূতাস্ত্যাজন্তি প্রচলিতবিভবং স্বামিনং সেবমানাঃ ॥
- (6) কতাদনাং ভীক্শুঃ পরশুভিক্রদগ্ৰৈঃ কিভিরহাং
রক্ষা কৃজস্তীনামবিরতকপতো পল্লদিতৈঃ ।

বনিন্দোকেচ্ছৈঃ পরিচিৎপরিপ্লেশকুপয়া
বসন্তঃশাখানাং ত্রণমিব নিব্রুন্তি কণিনঃ ॥

- (b) Parse বেদি in extract (2), ক্ষিতিরহা ann কুজস্তীনাং in extract (6).
(c) Derive নির্ভূত, উজ্জ্বলানন্ত, and পর্যন্ত in extracts (3) and (5) and give the first person lung (লুঙ) of their roots.

(d) Explain the allusion in extract (4).

5. Translate into English any three of the following extracts:—

- (a) রম্যাপি বীক্ষ্য মধুরাংক নিশমা শব্দান
পৰ্ব্বৎস্বকীভবতি যৎস্থখিতোহপি জন্তুঃ !
তচ্চেতসা স্মরতি নুনমবোধপূৰ্ব্বং
ভাবস্থিরানিজননান্তরসৌক্যদানি ।
(b) ভ্রমর্হতাং প্রাগ্রহরঃ স্মৃতোহসি নঃ
শকুন্তলা মূর্তিমতী চ সংক্রিয়া ।
সমানয়ঃস্তল্য গুণং বধুবরং
চিরস্ত বাচ্যং ন গত্যঃ প্রজাপতিঃ ।
(c) অপামৃষ্টানাং নিজম্পদিশনত্যা হিতিপদং
দধত্যা শালীনান্বন তিমুদারে সতি-কলে ।
ময়ুরাণামুগ্রং বিষমিব হরস্ত্যামদমহো
কৃতঃ কুৎসস্তারং বিনয় ইব লোকস্ত শারদা

6. Translate into Sanskrit any three of following extracts. :—

(1) What is the distinction between a mere brute and that man-beast who has no knowledge or thought of right or wrong whom the assemblies of the learned in heavenly wisdom drive from their company, and who seeks only the gratification of his appetite ?

(2) As a stone is raised with great labour up a mountain but is thrown in an instant so are our virtues acquired with difficulty and our vices with ease.

(3) A bad man though raised to honour always returns to his natural course as a dog's tail though wafmed by the fire and rubbed with oil, retains its form.

(4) Let not a man perform an act hastily ; want of circumspection is a great cause of danger ; prosperity pays homage even voluntarily to a man who acts with caution.

7. Translate the following into idiomatic Sanskrit :—

- (a) I like this naughty child.
- (b) It was a cry in the wilderness.
- (c) You have made this place solitary.
- (d) All who obtain their desired object are happy.
- (e) The ignorant rely on fate.
- (f) Favour me by clearing my doubts.
- (g) Men differ in their tastes.

SANSKRIT—PASS

Third Paper

1. Translate into English any two of the following passages :—

(a) সোহপি সন্নিভং প্রণম্যারভতাভিধাতুম্। এষ অপ্যাহমস্মি। পৰ্যটনৈকদা গতো বিদেহেবু। মিথিলায় প্রতিবেশ্যেৰ কচিন মাটিকায়ং বিশ্রামেভু মেতা কয়াপি বৃদ্ধতাপস্তা দস্তপাতঃক্ষণমলিল ভুমায় বাস্তিবি। ততস্তান্তান্ত মদর্শনাদেব কিমপি বস্বধরমশ্র প্রাবর্তত। কিমেতদশ কথয় কারণমিতি পুষ্টা সক্রমমাচষ্ট। আয়ুয়ন্ সনু ঞ্জয়তে পতিরন্তা মিথিলায়াঃ প্রহারবর্জানামাসীৎ। তন্ত খলু মগধরাজ রাজহংসঃ পরং মিত্রমাসীৎ। তয়োশ্চ বলভে বল-বরয়েরিবংশ বহুমতী প্রিয়ংবদে সখ্যাম্ প্রতি মমদদতাম, অথ প্রথমগর্ভাভিনন্দিতাং তাং চ প্রিয়সখীং দিদৃক্ষুঃ প্রিয়ংবদা বহুমাতা সহ ভত্রা পুশ্পপুরমগমৎ। অগ্নিয়েব চ সময়ে মালবেন মগধরাজন্ত মহৎ যুদ্ধমজনি। তত্র লেশতোহপি ছল ক্রিতাং গতিমগমন্ মগধরাজঃ। মৈথিলন্ত মালবেজ প্রবদ্ধ আগ্নিতঃ স্ববিধয়ং প্রতিনিবৃন্তো জ্যেষ্ঠস্ত সংহারবরণঃ হুতে বিকটবর্ষ প্রভৃতিতি ব্যাপ্তং রাষ্ট্রমাকর্ণ্য স্বতীয়াৎ হৃকপতে: সেনা বরবমাদিৎস্বরটবীপখমবগাহ লুধক সর্ববোহভূৎ।

(b) ততো রাজীবাব বহিঃপ্রবেশনং নিশ্চিতবতি রাজি সর্বৈ সামন্তাঃ পৌরাশ্চ মিলিতাঃ পুত্রং হৃষা পাণভয়াদ ভীতো নৃপতিঃ বহিঃ প্রবিণতীতি কিংবদন্তি সর্বরাজানি। ততো বুদ্ধিসাগরো ষারপালমাহ্ময় ন কেনাপি ভূপালভবনং প্রবেষ্টব্যমিত্যুক্তন্ত। নৃপমন্তঃপুৰে নিবেশ্য সভায়ামেকাকী সনু পবিষ্টঃ। ততো রাজমরণবার্তাং শ্রুত্বা বৎসরাজো গৃহমাগতং বুদ্ধিসাগরং নহা শনৈঃ প্রাহ, তাত ময়াভোজরাজো রক্ষিত ইতি। বুদ্ধিসাগরন্ত কর্ণে তন্ত কিমপ্যকথয়ং তছুক্ত। বৎসরাজন্ত নিজ্ঞাস্তঃ। ততো মুহূর্তেন কোহপি ষ্টাটিককুণ্ডলযুক্তিত কর্ণদুগলঃ কৌশেয়কৌপিনোমূর্তিমাংশ্চত্ৰচূড় ইবসভাং কাপালিকঃ সমাগতঃ। তং বীক্ষ্য বুদ্ধিসাগরঃ প্রাহ, যোগীজ্ঞ কুত আগম্যতে, কুত্র তে নিবাসন্ত, কাপালিকে ষ্মি চমৎকারকারী কলাবিশেষ ঔষধবিশেষবোহ্যন্তি।

(c) সোহপি ঐশ্য বিজ্ঞান্যামাস, দেব দেবতাদেবণায় দিঙ্ ব্রহ্মব্রহ্মব্রহ্মাপি বিয়া পার্শ্বাক্রান্ত বনস্পতেতঃ পরিণত পতঙ্গবালপল্লবাবতঃসিতে পশ্চিমদিগজ্ঞান্যাম্বে পঞ্চলাস্তহ্যাপস্পৃষ্টোপাশ্চ সন্ধ্যাং তমঃ সমীকৃতেষু নিয়োর্নতেষু গন্তমক্ষমঃ ক্ষমাতলে কিশলয়ৈরূপচর্যা শয্যাং শিশয়িবমাণঃ শিরসি কুর্বন্নল্ললিং যস্মিন্ বনস্পতো বসতি দেবতা সৈব মে শরণমন্ত শবাক্রচক্র চারভীষণায়ামন্তাং মহাটব্যামেকাকিনো মে গ্রহপ্তস্তেতুপথায় বামভুজমশয়িষি ।

2. Write out—

(a) The Plural. Nominative and Accusative of পূমান্ ;

(b) The Instrumental Plural of আপঃ ;

(c) The Locative singular of প্রতি and অক্ষি ;

(d) The Locative Plural of অনড়ান্ ;

(e) The Vocative and Superlative of ব্রহ্মহন্ ;

3. Give the Comparative and Superlative (Sing Nom. Masc.) of গুণ, গুরু, দূর, যুবন্ ।

4. Write out the optative, in all the three numbers and persons, Parasmaipada and Atmaneyada , of দ্বিষ্ ।

Write out the imperfect in all the three numbers and persons, Parasmaipada and Atmaneyada of ক্রী ।

5. Give the simple future, 3rd Person Singular Present, of ই, বুধ্, দহ, হৃজ্, বস্, নশ্ ।

Or,

Form the passive, 3rd Person Singular Present, of পা, স্থ, বিজ্, কৃ, খন্, শাস্ ।

6. Form short sentences illustrating the use of the several cases with the following (prepositional adverbs) :—অন্তরা (without), উভয়তঃ (on both sides of) : সার্ক্ (together) ঋতে (apart from) ; উপরি (above).

Or,

Form short sentences illustrating the use of the Accusative to denote (a) the goal after verbs of motion ; (b) duration of time and extension of space ; and the use of the double accusative after verbs of (i) knowing, (ii) appointing, (iii) begging, (iv) fining (দণ্ডয়) ।

7. Re-write the following passage, correcting all mistakes :—

কস্মিচ্চদেশে ধর্মবুদ্ধি পাপবুদ্ধিষ্ট হৌ মিত্রৌ প্রতিবসন্তি । অথ কদাচিৎ-পাপবুদ্ধা চিন্তিতং

যদহং তাবত্ যুথঃ দরিত্রাপেতশ্চ । তদেনং ধর্মবুদ্ধিমানীয় দেশস্তরং গম্যাত্ত্রায়েনার্থোপার্জনং
কৃত্যেনমপি বন্ধিত্বা হুখিন্ ভবামি । অথাত্তেহহনি পাপবুদ্ধির্ধর্মবুদ্ধিং প্রাহ । ভো মিত্র
বার্দ্ধক্যভাবে কিমাত্তনো চেষ্টিতং স্মরিত্বসি । দেশস্তরমদৃশ্য কাম্ শিষ্টজনবার্দ্ধাং কথয়িত্বসি ।

8. Mention and characterize the main classes of Sanskrit Epic poems. What reasons are there for holding that the Mahabharat in its present form is an amplification of an older and simpler poem ?

9. Give an account of the origin and history of the Sanskrit Drama. What would you consider the distinctive features of Kalidasa's poetical genius ?

10. State what you know as to the sources of our knowledge of the Sankhya system. Give a brief account of the main Sankhya tenets.

1910

SANSKRIT—PASS

First Paper

1. Translate into English any three of the following stanzas with clear reference to the context in each case :—

(a) হুথেন লভ্য দধতঃ কৃষীবলৈঃ

অকৃষ্টপাচ্য ইব শস্ত্রসম্পদঃ ।

বিতরতি ক্ষেমমদেবমাতৃকাঃ

চিরায় তস্মিন্ কুরবশ্চকাসতি ॥

(b) বিজিতা যঃ প্রাজ্যমযচ্ছদ্রস্তরান্

কুরনকুপ্যাং বহু বাসবোপমঃ ।

স বন্ধবাসাটুসি তবাধুনা হরন্

করোতি মহ্যং ন কথং ধনঞ্জয়ঃ ॥

(c) অভিমানবতো মনস্বিনঃ

প্রিয়মুচৈঃ পদমাক্রমকৃতঃ ।

বিনিপাত নিবৰ্তনকৰণ

মতমলিধনমাস্তপৌৰুষম্ ॥

(d) অভিমান ধনস্ত গড়রৈঃ

অহুভিঃ হুাসু যশশ্চিচীষতঃ ।

অচিরাংগুবিলাসচঞ্চলা

নমু লক্ষ্মীঃ ফলমাসুযজিকম্ ॥

(e) মতিমান্ বিনয়ঃ প্রমাথিনঃ

সমুপেক্ষত সমুন্নতিং বিনঃ

হৃজয়ঃ খলু তদৃগন্তরে

বিপদস্তা হাবিনীত সম্পদঃ ॥

(1) In extract (a) give the third person singular in লঙ্ and লৃঙ্ of the roots of দধতঃ and বিতম্বতি । Account for the third case-ending in স্তথেন । Give the third person singular of the root of চকাসতি in লিট্ ।

(2) In extract (b), name and expound the Samasas in বাসবোপমঃ and ধনঞ্জয় । Derive প্রাজ্য and অকুপ্য । What is কুপ্য ?

(3) In extract (c) parse আস্তপৌৰুষম্ । Derive আকরক্কত । Give the third person singular of the root in লৃঙ্, change the voice of the finite verb stating all consequent changes.

(4) In extract (d) decline অহু in প্রথম and চতুৰ্থী । Is there any peculiarity about its declension ? In what case does the root হু take the আস্তনেপদীয় form ? Illustrate your answer with examples.

2. Explain in Sanskrit any two of the following Stanzas :—

(a) কথাপ্রসঙ্গেন জনৈকদাহতাত্

অমুশ্বতাখণ্ডলস্থম্ব বিক্রমঃ

তবতিধানাদ্ ব্যথতে নতাননঃ

স দুঃসহান্ন পদা দিবোরগঃ ॥

(b) অখণ্ডমাখণ্ডলতূল্যধামভিঃ

চিরং ধূতা ভূপতিভিঃ স্ববংশজৈঃ

ঔয়াস্বহস্তেন মহী মদচ্যুত

মতজ্জেন অগিবাপজ্জিতা ॥

(c) স্পৃহবীরগুণৈর্মহাশক্তিঃ

চরিতে বস্তুনি বদ্ধতাং মনঃ ।

বিধিহেতুর হেতু-বাগাসাং

বিনিপাতোহপি সমঃ সমুন্নতে ॥

(1) Explain the double meaning in extract (a).

3. State in detail what you have been able to gather from your study of মহু about the principal characteristics of দণ্ড ।

4. Give the substance of the following sloka in Sanskrit stating the causes of the difference of punishment as ordained by মহু ।

তং দেশকালৌ শক্তিক বিজ্ঞাৎকাবেক্ষ্য তত্ত্বতঃ

যথার্থতঃ সম্প্রণয়েন্নরেষশ্চায়বর্তিব্য ॥

5. Explain any three of the following slokas in Sanskrit, with clear reference to the context in each case :—

(a) সান্না দানেন ভেদেন সমন্তরথবা পৃথক্ ।

বিজেতং প্রযতেতারীন ন যুদ্ধেন কদাচন ॥

(b) বাসনস্ত চ মৃত্যোশ্চ বাসনং কষ্টমুচ্চাতে ।

বাসনাদোধোধো ব্রজতি স্বর্ঘ্যাতবাসনী মৃতং ॥

(c) দূতকৈব প্রকুবীত সর্বশাস্ত্রবিশারদম্ ।

ইঙ্গিতাকারেণৈক্ষ্যং শুচিং দক্ষং কুলোকাতম্ ॥

(d) ধনদুর্গমহীদুর্গমুদ্গুণ বনদুর্গমেব বা ।

নৃদুর্গগিরিদুর্গংবা সমাক্রিয়া বসন্ত পুরম্ ॥

(e) বকবচ্চিস্তয়েদর্ধান্ সিংহবচ পরাক্রমে

বুকবচ্চাবলুপ্তে শশবচ বিনিম্পতে ॥

6. Explain clearly the simile in the following sloka :—

নগরে নগরে কুর্ঘ্যাদেকং সর্বার্থচিন্তকম্ ।

উচ্চেঃ স্থানং ঘোররূপং নক্ষত্রাণামিব গ্রহম্ ॥

7. Explain in Sanskrit the allusion contained in the following sloka :—

পৃথুস্ত বিনয়াজ্যং প্রাপ্তবান্ মনুরেব চ ।

কুবেরশ্চ ধনৈশ্বৰ্য্যং ব্রাহ্মণ্যকৈব গাধিজঃ ।

8. Translate into Sanskrit either of the following extracts :—

(a) Orpheus, having his beloved wife snatched from him by sudden death, resolved upon descending to the infernal regions to try if by the power of his harp he could re-obtain her. And, in effect, he so appeased and soothed the gods ruling the lower world by the melody and sweetness of his harp and voice that they allowed him to take his wife back, on condition that she should follow him behind, and he should not turn to look upon her till they came into open day. But he through the impatience of his affection and thinking himself almost past danger, looked behind him before they had reached the surface of the earth. Thereby the condition was violated : and the wife of Orpheus had to return to the lower regions. From this time Orpheus grew melancholy, shunned the society of men, and withdrew into solitude.

(b) 'Twelve years ago, Miranda' said Prospero, 'I was ruler of Milan and you were a princess and my only child. I had a younger brother, whose name was Antonio, to whom I trusted everything : and as I was fond of a quiet life and study, I, commonly left the management of my state affairs to your uncle, my false brother for so indeed he proved. I, neglecting all worldly ends, buried among my books dedicated my whole time to the bettering of my mind. My brother being thus in possession of my power began to think himself the duke indeed. The opportunity I gave him of making himself popular among my subjects awakened in his bad nature a proud ambition to deprive me of my dukedom. This he soon effected with the aid of the King of Naples, who was my enemy'.

'Wherefore', said Miranda, 'did they not at that hour destroy us' ?

'My child,' answered her father, 'they durst not, so dear was the love that my people bore me.'

SANSKRIT—PASS

Second Paper

1. Give the substance of any one of the following slokas in Sanskrit with reference to their context :—

- (a) ঐশ্বর্যাদনপেত্রীশ্রময়ঃ লোকহর্ষতঃ সেবতে
তংগচ্ছন্তু যেবিপত্তিঃ পুনন্তে দুর্ভাগস্বাদৃশাঃ ।
- (b) পরার্থানুষ্ঠানে জড়য়তি নৃপং স্বার্থপরতা
পরিত্যক্ত স্বার্থে নিয়তময়তীর্থঃ ক্ষিতিপতিঃ ।
পরায়ন্তঃ শ্রীতেঃ কণমিব রসং বেত্ত পুরুষঃ ॥

- (c) দেবস্ত যেন পৃথিবীতল বাসবস্ত
সাগ্রাসনাপনয়জা নিকৃতিন সোঢ়া ।
সোহয়ং স্বয়ংকৃতনরাধিপতের্মনধী
মৌর্য্যাত কথা নু পরিতুতি মিমাংসতে ॥

2. Derive four of the following :—

ঐশ্বর্য, প্রতিষ্ঠা, কৃতিনঃ, সত্বাদৃশাঃ in (a). জড়য়তি in (b), and সোঢ়া in (c) in the above. Account for লোট্ in বস্ত in (b), and বিধিলিঙ in সহেত in (c).

3. Explain any one of the following slokas in Sanskrit :

(a) অস্মান্ সাধু বিচিন্ত্য সংযমধনান্নুচৈঃ কুলং চান্ননং ত্রযাক্তঃ কথমপ্যাবাক্ষবক্তাং স্নেহপ্রবৃত্তিঃ
চ তাম্ । সামান্তপ্রতিপত্তিপূর্ব্বকমিয়ং দারেষু দৃষ্ট্ ত্বয়া ভাগ্যায়ত্তমতঃ পরং ন খলু তদ্বাচ্যঃ
বধুবদ্ধুভিঃ ।

- (b) স্বপ্নো নু মায়া নু মতিভ্রমো নু
ক্লিষ্টং নু তাবৎকলমেব পুণাম্
অসং নিবৃত্তো তদতীতমেতে
মনোরথা নাম তটপ্রপাতাঃ ॥
- (c) হৃতমু জদয়াৎ প্রত্যাদেশব্যালীকমপৈতৃত্তে
কিমপি মনসঃ সংমোহো মে তদা বলবানভূৎ ।
প্রবলতমসামেবং প্রায়াঃ শুভেযু হি বৃত্তয়ঃ
অজমপি শিরস্যাক্ষঃ ক্ষিপ্তং ধুনোত্যাহিশঙ্কয়া ॥

4. Expound the Samasas in সামান্তপ্রতিপত্তিপূর্ব্বকম্ in (a). মনোরথঃ in (b); and হৃতমু in (c) in the above. Conjugare the root of one of the following :—প্রবৃত্তিঃ, প্রপাতাঃ and ধুনোতি in লিট্ and লুঙ্ third person of all numbers. Parse উচৈঃ in (a) and স্বপ্ন in (b) above.

5. Explain the allusion contained in the following sloka :—

যযাতেরিব শঙ্খিষ্ঠা ভর্তৃর্বৃহমতাভব ।
হৃতং তমপি সজ্জাজং দেব পুরমবাগ্নুহি ॥

6. State the characteristics of Vidushaka, and define বান্দী and প্রকোপ ।

7. Answer one of the following questions :—

(a) In what connexions are the Parasikas mentioned in the Mudrarakshas ?

(b) How would you define a Gandharva marriage distinguishing it from other kinds of marriage enumerated in the Hindu Sastras ?

8. Translate one of the following extracts into English :—

(a) রাক্ষ । [সাবেগম্] হা ধিক্ কষ্টম্ । তেহপি হতাস্তপস্বিনশ্চিৎত্রবর্ষাদয়ঃ । তত্ কথং মহান্নাশায় রাক্ষসাশ্চেষ্টিতেন রিপুবিনাশায় । তত্ কিমিদানীং করবানি মল্লভাগাঃ । কিং গচ্ছামি তপোবনম্ । ন তপসা শাম্যৈতসবৈরং মনঃ । কি মূর্ধনমুয়ামি । জীবতি রিপৌ স্ত্রীগামি়ং যোগ্যতা । কিংবা সঙ্গসখঃ পতাম্যরিবলে নেদং ন যুক্তং ভবেত্ । চেতশ্চন্দনদাস-মোক্শরভঙ্গং স্বক্যাংকৃত্বাং ন চেৎ ॥

(b) সংকল্লিতং প্রথমেব ময়া তবার্থং

ভর্তারমাস্তদৃশং স্বকৃতৈর্গতা স্বম্ ।

চুতেন সংপ্রিতবতী নবমালিক্যেয়ম্

অস্ত্রামহং হসি চ সংপ্রতি বাীতচিস্তঃ ॥

ইতঃ পস্থানং প্রতিপদ্যস্ব ।

শকুন্তলা । সখীং প্রতি । হলা এসা দুবেণং বো হথে নি যেরো

উভে । অতঃ জনো কসন্ হথে সমপিয়াতো । বাস্পং বিহরন্তঃ ;

কাশ্চপং । অনশূয়ে অলং রুদিহা, ননু ভবতীভ্যামেব স্থিরীকর্তব্যং শকুন্তলা ।

9. Translate one of the following extracts into Sanskrit :

(a) সিদ্ধা । [গৃহীত্বা পাদয়ো নিপত্য স্বগতম্ এদং কথু অর্জ্জোবদেসেন করসসং অনচ্ এখ মে পঠমপরিষ্টে গথি কোবি পরিচিদো জহিং এদং অমচ্ চসখ স্নসাদং নিচ্ছিবিয় নির্ব দো ভবিস্মং । তা ইচ্ছামি অহং ইমাত্র মুদ্দি আত্র মুদ্দ অমাচ্চ স্ম জ্জ্বেব ভাণ্ডাগারে নিথিবিদ্ধং জাদা মে এদিনা পগয়োঅণং ভবিসস দ তদা গোচ্ছিস্মং ।

(b) প্রিয়ংবদা । সহি পহইবকো সে কস্ম অণয়ং পড়িগেহুই কিং বি উণ সামুকসো ক অো ।

অনশূয়া । সন্নিভম্ । তস্মিৎ বহু এদং বি কহেহু । ৩

প্রিয়ংবদা । জদা গিবস্তিউৎগইচ্ছই তদা বিনশবিত্তো মত্ত ভঅ বং পচমংস্তি পেন্নিঅ অবিণা-অতবল্লহারসন্ দুহিউনস্ ভঅবতা একো অবহাবো মরিস অর্কোতি
অনশূয়া । তদো তদো ।

প্রিয়বদা। তদো মে বঅণঃ অণহান্ভবিটং ৭ অরিহই কিত্ত অহিণভবণং দংসণেণ সাবো
নিবত্তিসসহ ভি মণঅন্তো সঙ্কঅন্ত সঅরিহিণ্ড।

10. Translate into Sanskrit :—

Once upon a time there were a tiger and a tigress who lived in a certain forest and had a family of three children. The father tiger grew old, began to fall, and just before his death he sent for his three children and addressed them as follows "Remember, my children," said he, "that the tiger is lord of the jungle, he roams about at his will and makes a prey of the other animals as he wishes, and none can gainsay him. But there is one animal against whom you must be on your guard. He alone is more powerful and cunning than the tiger. That animal is man and I warn you solemnly before I die to beware of man, and on no account to try to hunt or kill him". So saying, the old tiger turned on his side and died. The three young tigers listened respectfully to the words of their dying parent and promised to obey; and the elder brothers, who were obedient sons were careful to follow his advice. They confined their attentions to the slaughter of deer, pigs, and other denizens of the forest; and were careful whenever they came within sight or got scent of any human being, to clear off as fast as they could from so dangerous a neighbourhood.

SANSKRIT—PASS

THIRD PAPER

1. Translate any two of the following passages into English :

(a) অথৈষু দিবসেণ ভূয়োভূয়ঃ প্রস্তুতৈর্হে প্রেতমানো মন্নিবৃন্দেন বয়স্তামুপেতাঃ মনসৈবাচিভক্ত ইত্যবজ্ঞাতবান্। অধৈবং মন্নিণো মনস্তভূৎ। অথো মে মোহাদালস্তম্। অকৃতিতৈর্হে নোদয়ন্নক্ষিশ্লোহমস্ত্য হান্তো জাতঃ। স্পষ্টমস্ত্য চেষ্টানং ব্যতিক্রমঃ। তথাহি ন মাং স্নিদ্ধং পশ্যতি ন স্মিতপূর্ব্বং ভাষতে ন রহস্যানি বিবৃণোতি ন হস্তে স্পৃশ্যতি ন বাসনেষষ্মুকম্পতে নোৎসবেষ্মুগৃহ্ণতি ন বিলোভন বস্ত্র প্রেষয়তি ন মৎ স্কৃত্তানি প্রাণয়তি ন মে গৃহবার্ত্তাং পৃচ্ছতি ন মৎপক্ষান্ প্রত্যবেক্ষতে ন মামাসন্ন কার্যোষভ্যন্তরী করোতি ন মামস্তপুং প্রবেশয়তি। অপি চ মামনর্হেণু কৰ্ম্মণ্য নিযুক্তে মদাসনমস্তৈরবষ্টভ্যমানমমুজানতি। মঠৈরিণ্যু বিশ্রান্তং দর্শয়তি মদুত্তপ্তান্তরং ন দদাতি মৎ সমান দোহান্ বিগৃহীতি মর্মানি মাম্পহসতি মহার্হানি বস্ত্রনি মৎ প্রহিতানি নাভি-বন্দতি নয়জ্ঞানং স্থলিতানি সংপক্ষং মূৰ্ধৈরুদেবাযয়তি।

(b) অসৌ রাজকুমারো ভীষ্মদ্বা পাৰ্শ্বচরং পুত্রমেকমালোক্যাকথয়ৎ। প্রক্ষিপেৎ সাগরং ইতি। সতু লঙ্কারাজ্যবাসিনীকষ্টো দেবোদাজ্ঞাপয়তীতি যথা দিষ্টমকরোৎ। অহং তু নিরবলম্বনো

ভূজাশীতিতন্ততঃ স্পন্দমানঃ কিমপি কাষ্ঠং দেবদন্তমূরসোপলিষ্টং তাবৎ সন্তরণং কৃতবান্ যাবদ-
পাসরম্বাসরঃ শরীরীচ সর্বা। প্রতাসাদৃশ্যতে কিমপিবহিঃ। অমৃতাসন যবানাঃ। তেষামুদৃতা
নাবিক নায়কায় কথিতবন্তঃ কোহপায়মায় সনিজ্ঞ বন্ধ এব জলে লব্ধঃ পুরুষঃ ধনিজ্ঞন সন্তান ইব
প্রতিভাত্যসৌ। অগ্নিলেবা ক্ষণেনেক নৌকা পরিতুতা কাপি রণতম মথাবৎ। অবিভযু যবনাঃ।
তাবদতিজবা নৌকাঃ স্থান ইব বরাহম্ অস্মৎ পোতাং পর্যকংসতা প্রাবর্তত চ সংপ্রহার ! পরাজি-
তাশ্চ যাবনাঃ।

(c) এবং সংপ্রার্থ্য তস্তাভিমুখো ভূজা গর্বাধ্বনতকঙ্করঃ সংস্রমমূবাচ মাম্ কথমত্র ভবান্
মৃত্যুমুখে প্রবিষ্টঃ। যেনৈব গজঃ সিংহেন ব্যাপাদিতঃ। সচ মামেতদ্রক্ষণে নিযুক্ত্য নভাং
স্নানার্থং গতঃ। তেন চ গচ্ছতা মম সমাদিষ্টং যদি কশিদিহ ব্যাঘ্রঃ সমায়াতি তং ত্রয়া হৃগুপ্তং
মামাবেদনীয়ং যেন বনমিদং ময়া নির্বাঘ্রং কর্তব্যং যতঃ পূর্বং ব্যাঘ্রেণৈকেন ময়া ব্যাপাদিতো গজঃ
শূন্তে ভক্ষয়িত্বোচ্চিষ্টতাং নীতঃ। তদ্দিনাদারভ্য ব্যাঘ্রান্ প্রতি প্রকুপিতোহস্মি। তচ্ছ ত্রয়া ব্যাঘ্রঃ
সমুদ্রমাহ ভো ভাগিনেয় দেহি মে প্রাণদক্ষিণাম্। ত্রয়া তস্তাত্র চিরায়াতাত্তাপি মদীয়া কাপি
বার্তানাপ্যেয়া। এবমভিধায় সত্বরং পলায়ক্কে ॥ অথ গতে ব্যাঘ্রে তত্র কশিৎ দ্বীপী সমায়াতঃ।
তমপি দৃষ্টাসৌ বাচিস্তয়ং দৃঢ়দংষ্ট্রাহয়ং চিত্রকঃ। ততস্তমপুবাচ। ভো ভোগিনীহৃত কিমতিচিরা
দন্তোহসি। কথং চ বুভুক্ষিত ইবলক্ষ্যসে। এষ গজঃ সিংহেন হতস্তিষ্ঠতি অহংচাস্ত তদাদিতৌ
রক্ষঃপালঃ।

2. Give the instrumental and locative forms (masculine) of উপেয়িবস্ and মণবন্ and the vocative singular forms of উপানহ্।

3. Show giving the reason in each case, the difference of meaning between—(a) মহাসেবা and মহৎসেবা; (b) অপথঃ and অপস্থা; (c) নরসখঃ and নরসখা (নরসখি), (d) স্নহঃ and স্নহয়ঃ and (e) রাজান্ and রাজধান্।

4. Give the feminine forms of আচার্য্য, হিম, যবন and শূত্র।

5. Form short sentences illustrating the use of (a) অত্যন্ত সংযোগে দ্বিতীয়া, (b) প্রকৃত্যাদিত্যত্বতীয়া; (c) ক্রিয়াযোগে চতুর্থী; (d) আঙ্ (আ) যোগে পঞ্চমী, (e) কৃত্যোগে কর্ত্তরি ষষ্ঠী।

6. Give the third person singular forms of :—

(a) জন্, তন্, and ঋন্ in লুঙ্ (first preterite).

(b) সো, য়, and ব্যাৎ in লঙ্ (first preterite).

(c) মসজ্, হৃহ্ and কৃহ্ in লৃট্ (future).

(d) চি, অধি, ইঙ্ (ই) and অদ্ in লিট্ (past).

7. What is a नाभधातु? Give an instance of it. Give the desiderative (सनन्त) form of दृश. and the causative (गन्तु) form of सद् in लट् (present) third person singular.

8. Give the लोट (imperative) second person singular forms of अस, मृष, and ह, and the past participle (कृ) forms of चक्ष, सज् and छिब्.

9. Correct or justify any five of the following :—

(a) दुःशौले बालकः सर्वदैव शिक्षकं द्रष्टुं ईर्ष्यति च सतीर्थान् ।

(b) राज्ञः नगधाम्युपवसति । अतः सर्वेभ्यो तस्मै करमर्पय ।

(c) स निश्चेष्टो गृहे गृहे ध्याते-श्रुतं संतिष्ठति च ।

(d) वीरः शत्रून् पराजय्यतुपक्रामति च द्विषिष्यति ।

(e) छात्राः शिक्षकं प्रभुं जिज्ञासन्ति च तद्वृत्तम् ।

(f) शिशुना पितरं मालां वाचते ।

(g) बाह्यो मुखं व्यादत्त आददाति च खाद्यम् ।

10. Discuss Macdonell's theory of the origin and development of the Sanskrit Alphabets. What probable date does he assign to their origin?

11. State and criticise the different theories regarding the date of Kalidas.

12. Write short notes on—(a) Kumarila. (b) Hieune Thsang. (c) Alexander Hamilton ; (d) Asvaghosha ; and (e) Somadeva.

13. Name and characterise the principal Sanskrit lyrics.

1911

SANSKRIT—PASS

First Paper

1. Translate into English any three of the following stanzas with clear reference to the context in each case :—

(a) निसर्गद्वैतबोधमवाधिविह्वलाः कं भूतानां चरितः कः जन्तवः ।

तुवाभुभावोदयमवेदि यन्मया निगूढतत्त्वं नयवन् विद्विषाम् ॥

(b) कृतारिषड्वर्गजयेन मानवीमगम्यारूपां पदवीं प्रथितम्ना ।

विजया नन्दनदिवसन्ततन्निना वितन्त्रते तेन नयेन पौरुषम् ॥

- (c) ভবন্তমতর্হি মনসিগর্হিতে বিবর্তমানঃ নরদেববসন্ত নি ।
কথং ন মনুজলয়তাদীরিতঃ শমীতরং শুকমিবাপ্রিরুজিতঃ ॥
- (d) ন সময়পরিরক্ষণঃ ক্ষমং তে নিকৃতিপরেষু ভূরিধামঃ ।
অরিবু হি বিজয়ার্থিনঃ ক্ষিতীশা বিদধতি সোপধি সংবিদুষণানি ॥
- (e) মদমানসমুদ্রতং নৃপং ন বিযুক্তো নিয়মনমুদ্রতা ।
অতিমুদ্র উদ্রুজতে নয়ান্নয়হীনাদপরজাতো জনঃ ॥

(1) In textract (a) give the third Person Singular in *lan* and *lun* of বিদ in the active voice. Parse অবৈদি । Account for the masculine gender in অহন । Derive অনুভবঃ । What is the technical meaning of নয়বসন্ত ?

(2). In extract (b) what is বড়বর্ণ ? Derive প্রথিতহ্না । Expound the *samasa* in অন্ততন্ত্রিনা । Account for the third case ending in নয়েন । Give the third person singular of তন্ in *lit* in both the *atmanepadiya* and *parasmai-padiya* forms.

(3) In extract (d) parse সোপধি । Expound the *samasas* in নিকৃতিপরেষু and ভূরিধামঃ । In what number is বিদধতি ? Give the third person singular of the root of বিদধতি in *lan*.

(4) In what voice is অপরজাতে ?

2. Explain in Sanskrit any two of the following stanzas with clear reference to the context :—

- (a) পুরঃসরাঃ ধামবতাং যণোধনাঃ সূহৃদসং প্রাপা নিরাকরমীদৃশম্ ।
ভবাদৃশাশ্চৈবধিকুর্বতে রতিং নিরাশ্রয়া হস্ত হতা মনসিতা ॥
- (b) অভিমানধনস্ত গদ্বরৈরহুভিঃ স্থানু যশশ্চিটীযতঃ ।
অচিরান্তে বিলাসচকলা নহু লক্ষ্মীঃ ফলমাসুবঙ্গিকম্ ॥
- (c) উপকারকমায়তেভুশং প্রসবঃ কর্মকলস্ত ভূরিণঃ ।
অনপায়ি মিববর্ণং দ্বিবাং ন তিতিক্ষা সমমস্তি সাধনম্ ॥
- (d) বিধি সময় নিবেগাদীপ্তি সংহারজিহ্ম
শিথিল বহুসগাধে ময়মাপৎপয়োদৌ
রিপুতিমিরমুদস্যোদীয়মানং দিনাদৌ
দিনকৃতমিব লক্ষ্মীঃ তাং সমভ্যোতু সদা ।

In extract (a) account for the *atmanepa la* in অধিকুর্বতে ।

3. Give the substance of the following stanza in your own words in Sanskrit or in English the double meaning if any. State with examples the cases which take the *atmanepadiya* form ;—

अभिवर्धति बोधुपालयन् विविबीजानि विवेकवारिणः ।

स सदा फलशालिनीं क्रियां शरदं लोक ईवाधितिष्ठति ॥

4. Explain any two of the following slokas, with reference to the context in each case :—

(a) न तेन वृद्धो भवति येनांशु पलितः शिरः ।

यो वा युवापावीयानस्तं देवाः स्तुविरं विदुः ॥

(b) नारुद्धः श्रुदार्थोपि न परद्रोहकर्मधीः ।

यथाश्रोत्रिजते बाचा नालोक्यं ताम्दीरयेत् ॥

(c) यथा पनन् पनित्रेण नरो वारिधिमधिगच्छति ।

तथा गुरुगतां विद्यां शुश्रूषमधिगच्छति ॥

(d) आचार्यो ब्राह्मणो मूर्तिः पिता मूर्तिः प्रजापतेः

माता पृथिव्या मूर्तिस्तु भ्राता सो मूर्तिराश्विनः ॥

(e) उपध्यायान्महाचार्य आचार्यानां शतं पिता ।

सहस्रं तु पितृभ्राता गौरवेनातिरिच्यते ।

(f) अन्नं वा वस्त्रं वा यन्मृत्योस्तोपकरोति दुःखं ।

तमपीह गुरुं विद्याद्धतोपक्रियया तया ॥

In extract (e) give the feminine form of आचार्य ॥

5. Define the limits of ब्रह्मवर्ष and ब्रह्मर्षि *desas* as given by Manu. Which of these two *desas* is described by the great lawgiver as the principal seat of सदाचार to be imitated by all men ?

6. Give in simple Sanskrit a succinct account of the *acharas* enjoined by Manu as contained in the second Chapter of the Code.

7. Translate into Sanskrit either of the following extracts :—

(a) One morning, as Ram was going to visit Usha, he saw on the ground a man lying asleep, about whose head a large green snake had twisted itself. The snake seeing Ram approach glided away among the bushes. Ram on coming nearer, discovered a lioness that lay couching with her head on the ground, watching like cat and waiting till the sleeping man awakened ; for it is said that lions will prey on nothing that is dead or sleeping. It seemed as if

Ram was sent by Providence to free the man from the danger of the snake and the lioness. But when looked in the man's face he perceived that the sleeper exposed to this double part was his own brother Hari who had so cruelly used him and has threatened to destroy him. He was almost tempted to leave him a prey to the hungry lioness ; but brotherly affection and the gentleness of his nature soon overcame his first anger against his brother. He drew his sword and attacking the lioness slew her. He thus preserved his brother's life from the venomous snake and from the furious lioness. But before he could conquer the lioness, she had torn one of his arms with her sharp claws.

(b) The plainness of Cordelia's speech, which Lear called pride, so enraged the old monarch—who in his best of times always showed much of spleen and rashness, and in whom the dotage incident to old age had so clouded his reason, that he could not discern truth from flattery nor gay painted speech from words that came from the heart—that in a fury of resentment he retracted the third part of the kingdom which yet remained and which he had reserved for Cordelia, and gave it away from her, sharing it equally between her sisters and their husbands. So preposterous a disposal of his kingdom, so little guided by reason, and so much by passion, filled all his courtiers with astonishment and sorrow ; but none of them had the courage to interpose between thus incensed king and his wrath, except the Earl of Kent, who began to speak a good word for Cordelia, when the passionate Lear on pain of death commanded him to desist. But the good Kent was not so to be repelled. He had been ever loyal to Lear whom he had honoured as a king, loved as a father, followed as a master.

SANSKRIT—PASS

Second Paper

1. Explain in Sanskrit, with reference to the context, any one of the following passages—

- (a) ভয়ং তাবৎ সেবাদিতিনিবিশতে সেবকজনঃ
ততঃ প্রতীদগ্নাস্তবতি হৃদয়েষব নিহিতম্ ।
অত্যাধারুঢাণাং পদমসুজনেষব জননং—
গতি সোচ্ছ্রুণাং পতনমসুকুলং কলয়তি ॥

- (b) ফলযোগমবাপ্য সারকানাং বিধিযোগেন বিপক্ষতাং গতানাম্ ।

ন শুচেষ ভবতাধোমুখানাং নিজতুগীশয়নব্রতং প্রতুষ্টো ॥

2. Explain any two the of following passages :—

(a) असंशयं कृत्रपरिग्रहकमा यदार्थमश्रामभिलाषि मे मनः

सतां हि सन्देहपदेयु बभूवु प्रमाणमन्तःकरणं प्रवृत्तयः ॥

(b) विचिन्तयन्ती यमनञ्चमनसा—

तपोधनं वेदसि न मामुपस्थितम् ।

अरिश्ठाति वा न स बोधितेहपि सन्

कथां प्रमत्तः प्रथमं कृतमिव ॥

(c) एवमाश्रमविरुद्धवृत्तिना संयमः किमिति जगत्तुष्या ।

सङ्गसंश्रयहोहपि दृष्टते कृष्णसर्पशिशुनेव चन्दनः ॥

3. Give the substance of the following in simple Sanskrit with reference to the context—

लेखोहयं न ममेति नोत्तरमिदं मुञ्चा नदीया यतः

सौहार्द शकटेन पण्डितमिति श्रद्धयमैतत्कथम् ।

गौर्यो भूषण विक्रमं नरपते को नाम संभावयेत्

तस्मात् संप्रतिपत्तिरेव हि वरा न ग्रामामत्रोत्तरम् ॥

4. (a) Parse any two of the words underlined in (1) (b) above
(b) Conjugate in the third person singular aorist (lun) the roots of any two of the words underlined in (b) above.

(c) Expound the samasas in any two of the compound words in 2 (c) above, noticing any peculiarity.

(d) Derive any two of the words underlined in 3 above.

5. Explain the allusion in :—

शिवेरिव समुद्धृतं शरणागत रक्षया ।

निर्धायते क्षया-साधो-यशोहपि श्रद्धा विना ॥

6. Either quote or give in Sanskrit the substance of the advice given by Kanya to Sakuntala when she was being sent to the home of her husband.

7. Give the characteristics of कङ्कुकिन् and define ज्ञातृक्षिक् and आकाशभाषितम् ।

8. Translate into Sanskrit one of the following passages :—

(a) अन। हला ममापि अथि कोदूहलं । ता पुच्छिसं दावणं अज्जसं मह्वालावज्जणिदा
वीसन्तो मं आलावेदि । कदधे रात्रिसिबं सो अलङ्करी आदि अज्जेण । कदमो वा देसो

বিরহ পঙ্খসহুও করী আদি কিয়মিত্তঃ বা অঞ্জন-সুউমরিণ তবোবণ গমণপ রসসমে অন্তাউবণী
দো স্তি ।

(b) প্রিয়ং । হৃদহীকী । তং জ্বেব সংবৃত্তং জং মএ চিত্তিদং । কস্মিণ পি পুআরিহে
অবরদ্ধা স্পৃহিঅআপিঅসহী সউস্তলা ।

অন । এ কথু জস্মিণ কস্মিণ পি । এসো দুধাসো স্তলহীকী বোমহেসী । তথা সবিরল
পাদতুবরা এ গদী এ পাউণি উত্তো ।

অণে হ্রদ পহাদো পহবদি দহিহুং । তা গচ্ছ পা এম্ম শডিঅ নিউত্তাবেহি ।

9. Translate into English any two of the following passages—

(a) চাপ । বৎস শ্রোত্রিয়াক্ষরাণি প্রযজ্ঞেন লিখিতাশ্চাপি নিয়তম্ । ক্ষুটানি ভবন্তি
তদ্রূঢ়াত্মা মম্ববচনাস্তিষার্থকঃ । [কর্ণে কথয়িত্বা] এভিরক্ষরৈঃ কেনাপি কিমপি কস্তাপি
স্বয়ং বাচামিভাত্তবহনামানং লেখং শকটদাসে লেখয়িত্বা মামুপতিষ্টত । ন চাকোয়মস্মৈ চানকো
লেখয়তীতি ।

(b) বিরা । স খলু মূৰ্ণস্তং স্মাভিভূতি সৃষ্টং মহাস্তূৰ্থরাশিমবাপ্য মহতা ব্যানোপ-
ভৌক্তমারদ্ধবান্ । ততঃ কৃত্যোয়ং মুয়ান্ খনাগমন্তবেতি পৃচ্ছমানোয়ং যদা বাক্যভেদাদ্বছন
কথরদা চানকা হতকাদেশাক্ষিচিহ্নেণ বধেন বাপাদিতঃ ॥

(c) অশ্রুচ্চ কৃত ককলহঃ কৃৎস্না স্বতস্মৈ চ ত্বয়া কথচি কালং বাবর্হতবাম্ ইত্যায়োপদেশ
সচ কথমপি ময়া পাতকমিধ্যাত্তাপগতঃ । অথবা শব্দদায়োপদেশ সংক্রিয়মাণ মতয়ঃ সদৈব স্বতস্ত্রা
বয়ম্ ।

10. Translate into Sanskrit :—

So he went there, and began to gather the lotuses. And while he was thus engaged, the terrible Rakshasas, who guarded them, endeavoured to prevent him from doing so. And being armed he killed some of them, but the others fled and told king Kapalasphota. And when that king of the Rakshasas heard of it, he was enraged and came there himself, and saw Asokadatta with the lotuses he had carried off. And in his astonishment, he exclaimed, as he recognized his brother. Is this my brother Asokadatta come here ? Then he flung away his weapon and with his eyes over flowing with tears of joy, he quickly ran and fell at his feet, and said to him, "I am, Vijoyadatta, your younger brother ; we are both the sons of that, excellent Brahmin Gobinda Swamine. And by the appointment of destiny, I become a Rakshasa as you see, and have continued such for this long time ; and I am called Kaplasphota from my cleaving the skull on the funeral pyre."

SANSKRIT—PASS

Third Paper

1. Translate any two of the following passages into English :—

(a) একদা স নৃপো মহতা বলেন যুগয়ার্থী সভার্যো বনমগচ্ছৎ । স তত্র যুগাধরাহান্ম-
হিবানজাংশ্চ বজ্রাঞাধাপদান্ যন্ যদৃচ্ছয়া ক্রীড়তো হরিণমিথুনস্ত পুমাংসং স্বশরস্ত শরবামকরোৎ ।
স চ তেন বলবান্মগ্নি তড়িতস্তম্ভগুরুপং বিহায় তাপসবেশেন সবাধমিদমাহ । ভো রাজহ্নঃ
কিল কিংদোনাং মহৰ্ষিঃ স্বচ্ছন্দভোগকাময়া স্বন্দ্বধ্মাহমে বচরম্ । ঈদৃশে ময়ি কিমপরাধ-
মুৎপ্রেক্ষ্য প্রকৃতবানসি । নহি নিরপরাধোবিশেষতো মাননীয়ো মাধুশো জনো ব হিংসয়েব
প্রাণঘাত্রাং বতঃস্বয়ং বা পীড়য়িতুং তে সাংপ্রতন্ । হিংস্রস্ত দমনায় হি রাজাঃ শস্ত্রং ন তু
কৃপণজনক্লেশায় । যদেবমনাকলম্ নামবদীন্তস্মাৎ স্ত্রীব্যতিকরনিমিত্তং এব তবাপিহুতুরস্তাতীশপ্তা
যিরতাস্থরভূৎ ।

(b) অশ্বেদ্বা বামদেবশিষ্ঠঃ কমপি শিশুমানীয় বাজানমব্রবীদলগ্নম দেব ! তীর্থযাত্রা
প্রসঙ্গেন কাবেরীতীরং গতোহং বালকমেনম্ উৎসঙ্গে কৃড়া ঋদতীঃ কামপি স্থবিরামালোক্যা-
বোচম্ । স্থবিরে ! কা ত্বং ? কথং বা রোদিসি বালকশ্চ কস্ত নেত্রানন্দকর ইতি, সা করযুগেন
বাস্পং প্রমুজাতব্রবীত । ব্রহ্মন্ রাজহংসামাতস্ত সিতবর্ষধঃ কমলীয়াৎ সূত সত্যবন্ধা । তীর্থযাত্রা
প্রসঙ্গেন দেশমিমমাগতঃ স কুত্রচিৎগ্রামে কালী নাম কামপি বিপ্রতনয়ামুপযম্য তস্তা অনপত্যতয়া
তৎকনীয়সাং ভগিনীং গৌরীং নাম পরিণীয় তস্তামেনং তনয়মলভত । কালী তু সাত্বয়ং যাত্রা ময়া
সহ বালকং কেচিন্ মিষেধাধীয়াস্ত্রামেব তটস্থামক্ষিপত । অহং তু করৈগৈকেন বালকমুদধৃত্যা-
পরেণান্তসি প্রবমানা নদীবীগগতস্ত কস্তাচিন্তেরোঃ শাখানালম্ব্য তত্র শিশুঃ নিধায় নদীবীগেনোহমানা
তত্তরুস্থিতেন কালসর্পেণ দষ্টায়ি ।

(c) নমু কিরাতোক্তমা ঘোরপ্রচারে কান্তারে স্থলিতপদঃ স্থবিরং ভূহরোহং মম পুত্রকং
কশিচ্ছায়ায়ং নিক্ষিপ্য মার্গাধেষণায় কিংচিদন্তরমগচ্ছম্ । স কুত্র গতঃ কেন বা গৃহীতঃ
পরীক্ষ্যাপি ন বীক্ষ্যতে । তন্মুণাবলোকনেন বিনাশনেকাগ্ন্যহস্ততীতানি কিং করোমি ক যামি
ভবন্তি ন কিমদর্শি । হিজোক্তমা কশিতব্রতিষ্ঠতি কিমেব তব নন্দনঃ সত্যমেব । তদেনং
গৃহণিত্বাঙ্গু বৈবানুকুল্যেন তে মন্তুং তং ব্যতরন্ । তেভ্যো দস্তাশীরহং বালকসঙ্গীকৃত্য
শিশিরোৎকাদিনোপচারেনাশাস্য নিঃশঙ্কং সমানীতবানস্মি । এনমায়ুসন্তং পিতুরুপোভবানভিরক্ষ-
তাং । রাজা হৃদ্যদাপ্লিমিত্তঃ শোকং তন্নন্দনবিলোকনমুত্থেন কিংচিদধরীকৃত্য তমুপহার-
বুর্ধ্বণামাহুয় রাজবানসিব পুণোষ ।

2. (a) Apply the rules of Sandhi to any three of the following pairs of words :—

বিশ্ব + ওষ্ঠঃ ; হরে + এহি ; সন্ + শঙ্কুঃ ; গৌঃ + পতি ; and পুনঃ + রমতে ।

(b) Decline three of the following words :—

তির্ঘ্যচ (neuter) in the nominative case ; ত্রী in the objective case দিব্ in the instrumental case ; অদস্ (masculine) in the dative case, and মতি in the ablative case.

(c) Give the feminine forms of three of the following words :—

হৃদন্ত, উপাধ্যায়, সাধু, গুরু and মাতুল ।

3. Correct or justify three of the following sentences :—

(a) রামঃ প্রভাবেন রাবণং পরাজয়ত ।

(b) মে মাতৃষস। জীবতি ।

(c) নৈতন্মম স্বকরন্ ।

(d) স মে প্রিয়সখা ।

(e) আহুয়তি তং মনো যুদ্ধায় ।

4. Either

(a) Form Compound words (samasas) out of the following :—

প্রিয়া জামা যস্য সঃ ; গাবশ্চ মহিষাশ্চ ; and মাতা চ পিতা চ তৌ ।

Expound the samasas in three of the following :—

ঈশ্বরাদীনঃ । তীর্থকাকঃ । পুরুষব্যাভ্রঃ । অহর্দিবম্ and পদ্মগন্ধিঃ ।

(b) Give the superlative form (with the suffix ইষ্ঠ), of any three of the following words :

দূর ; ক্ষিপ্র ; দীর্ঘ ; বহল ; and বৃদ্ধ ।

5. Conjugate the following roots অদ্ in lun, অস্ or বহ্ in iit and ক্ৰধ or জন in lan third person oniy.

6. Derive any four of the following words :—

ভাগ্য ; ভাৰ্য্যা ; পাপঘ্ন ; শ্রক ; ভয়াদৃশ ; শীত and উদাসীন ।

7. Change the voice in the following :—

(a) গোপঃ গা গ্রামম্ অনৈবীং ।

(b) স বনভবান্ধীং পশ্রদ্ধ ।

8. Discuss the date of composition of the Mahabharata

Or.

State with examples the principal characteristics of the Indian drama.

9. Trace the origin of the Panchatantra and indicate its relation to Aesop's fables.

Or,

Name the principal Puranas which disseminate the cult of Siva and write short notes on the Katha-Sarit Sagara, Mricchakatika, and Navasasanka-Chariata.

10. Write short notes on the following authors :—

(a) Either Patanjali or Ramanuja ; (b) Either Aryabhata or Varahamihira and (c) Either Dandin or Jayadeva.

1912

SANSKRIT—PASS

First Paper

1. Translate into English any three of the following extracts —

(1) अर्द्धाङ्गीकृतनाम्पतामपि गाढामुरागि यत ।

पितृभाङ्ग जगतस्तुष्टौ कश्चिन्निहत नमः ॥

इहाश्चर्यमुपेनैव सर्वं बाधायते मया ।

नामुलं लिप्यते किञ्चिन्नानपेक्षितमुदाते ॥

(2) अतः एवापस्तम्बः । कुशलमवरवयसं समानवयसं वा विप्रं पृच्छेत् ! अनामयं ऋत्रियम् । क्षेमं वैश्वम् । आरोग्यं शुद्धम् । अवरवयसमभिवादकं वयस्तुमनभिवादकम्—
प्रीतिमर्थमपस्तम्बः स्फुटयति गोविन्दराजस्तु प्रकरणं प्रतीतिवादकस्तु वयसं वयसं प्रथमाह ।
चमकारकारितया च सर्वास्त्यालोके लम्बी मङ्गलानि च शान्तानि प्रथमे वीरपुरुषास्त्यायन्त
पुरुषानि च भवन्त्याध्यातारश्च प्रवक्तारो भवन्तीति ।

(3) नवर्षगौरवमित्रात् कथं वशीसमासः । पुरणकुण्ठेत्यादिना प्रतिषेधात् नैव दोषः ।
ये शुक्लादयः यथा गुणे गुणिनि च वर्तन्ते यथा—पटुश्च शुक्लः पटु इति च तेषामेवात्र निषेधात् !
ये च सदा गुणमात्रं वचना यथा—गौरवः प्राधान्यः रसो गङ्गाः पूर्ण इत्येवमादयस्तु यथा निषेधात् ॥

(4) মেধাতিথিস্তু অতিমৃত্যুপেক্ষয়া পরো ধর্মোহপি লৌকিকঃ। ধর্ম শব্দে ব্যবস্থায়ামপি যুক্ত্যতে। যদি চাণ্ডীলোপাত্ত প্রদেশে মা চিরং হা মা ব্যাস্মিন্তসি স্নায়ং ইতি বদতি তমপি ধর্মমমুত্তিষ্ঠত।

প্রাগলভ্যাল লৌকিকং বস্তু পরং ধর্মমমতি ব্রবন্।

চিত্রং তথাপি সর্বত্র স্নায়ো মেধাতিথি সত্যম্।

2. Translate into Sanskrit any three of the following :—

(1) As one, who will work with a small pot, goes to a potter's house and says, "Make a small pot, I shall work with it, so one, who wishes to use words, does not go to a grammarian and say "make word, I shall use them".

(2) Do you remember, Aruni, we lived in Kashmir last year? Verily a paradise on earth! What rare pomegranates! What luscious grapes! What exquisite fields of saffron, defying the splendours of the northern dawn!

(3) There they stood in the midst of the Cauvery the mother and the child. The river seemed to be easily fordable. It was not even knee-deep then. But the tide was now flowing in,—a full foaming impetuous tide with a sound like that of the distant sea.

(4) I heard only this morning that he studied three Vedas with their upanishadas long before I was born. He recited some *riks* and *yajus* texts with a perfect accent yesterday evening. He is a little under sixty now, exactly of the same age as my father.

(5) Have you ever seen a magician? I saw one yesterday. He made a full blown lotus of two or three fragments of a human skull! Has it not been said that God is a magician too and world His eternal magic? We bow to Him, the world Magician.

3. What are the sources (প্রমাণানি) of ধর্ম according to Manu? Explain how you would reconcile its doctrine of a five-fold or fourfold source with the following text :—

(1) অতিস্তু বেদো বিজ্ঞেয়ো ধর্মশাস্ত্রং তু বৈ স্মৃতিঃ

তে সর্বার্থেষামীমাংস্তে তাভ্যাং ধর্মো হি নির্বভে

(2) ধর্মং জিজ্ঞাসমানানং প্রমাণং পরমং স্মৃতিঃ।

4. Sketch a student's daily routine as prescribed by Manu. Is a student absolutely prohibited from partaking of animal food? Discuss the question briefly.

5. (a) Explain any four of the following technical terms :—

অবভূথ। উপকূৰ্ণণ। দীক্ষণীয়া। নিবীতিম্। নৈটিক। ব্রহ্মজ্ঞলি। মহাব্যাক্তি। ব্রাত্য। সমাধ্যায়িত। সমাবর্জন।

(b) What is the significance of the epithet মহৎ in মহাব্যাহতি ?

6. Analyse grammatically any five of the underlined words in the following extracts, adding the বিগ্রহবাক্য in each case and grammatical notes, wherever necessary :—

- (1) এবং চরতি যো বিপ্রো ব্রহ্মচর্যাম্ ।
- (2) ত্রিপদা চৈব সাবিত্রী ।
- (3) ক্ষরতি সর্পাবৈদিকা জুহোতি যজতিক্রিয়া ।
- (4) সান্নিজ্রেতা গরীয়সী ।
- (5) ব্রতবন্দেবদৈবতো পিত্রো কর্ণগাথর্বিবৎ । কামনভার্থিতোন্নায়াৎ ।
- (6) বলমূর্জং চ যচ্ছতি ।
- (7) উদকুস্তং হমনসো গোশকৃৎস্নতিকাকুশাম্ ।
- (8) ব্রাহ্মণে চাননুচানে ।
- (9) ক্ষত্রিয়স্ত তু মৌগ্ধী জা ।
- (10) কায়মঙ্গু লিমুলেহগ্রে ।

7. What is the source of the plot of Bharavi's epic ? Derive fully the title কীরাতার্জুনীয়ম্ ।

8. Re-write three of the following extracts in prose, changing the Voice completely in each :—

- (1) স কিংসখা সাধু ন শান্তি যোহধিপঃ
হিতান্ন যঃ সংশ্লগ্নতে স কিং প্রভুঃ ॥
- (2) স সন্ততং দর্শয়তে গতশ্লয়ঃ
কৃত্যধিপতামিবা সাধু বজ্জতাম্ ॥
- (3) স্বয়ং প্রত্নাধোদা গুণৈরুপম্ভতা
বহুপমানসা বহুনি মেদিনী
- (4) মপেধথিম্নোহনুমতঃ পুরোধসা
ধিনোতি হযোন হিরণ্যরেতম্ ॥
- (5) পটৈস্তদবদন্যঃ ক ইবাগহারয়ে
অনোরমামান্নবধুমিব শ্রিয়ম্ ॥

9. Re-produce, as tersely as you can, Mallinatha's glossary on the following stanzas :—

কথাপ্রসঙ্গেন জনৈরুদাহিতা—

দম্ভস্থতাখণ্ডলমু বিক্রমঃ ।

তবাভিধানাছাথতে নতাননঃ

স দুঃসহান্মত্বপদাদিবিয়োগঃ ॥

10. (a) Derive with full grammatical notes, the underlined words in the following extracts :—

(1) প্রণমন্তি সদা স্ববোধনং প্রথমে মানভূতাং ন বৃক্ষয়ঃ ॥

(2) মধুরেরবশানি লম্বয়ন্নপি তিব্যক্তি শমং নিরীক্ষিতৈঃ

(b) Give the alternative form of প্রথমে in (a) (1) and the genitive plural of the stem of তিব্যক্তি in (a) (2) What case is তিব্যক্তি and why ?

11. Scan the following verses, naming the metre in each :—

(1) জটধরঃ সঙ্গ্রহবীহ পাবকম্ ।

(2) দিনকৃতমিবলক্ষ্মীস্তাং সমভ্যেতু ভূয়ঃ

SANSKRIT—PASS

Second Paper

1. Answer one of the following questions (a) and (b).

(a) On what authentic historical fact of ancient India is the drama Mudraraksasa founded ? Give short accounts of the principal characters of the drama.

(b) Describe the plot of the Sakuntala in your own words in Sanskrit or English.

2. Explain any two of the following extracts in simple Sanskrit with clear reference to the context in each case :—

(a) ঐশ্বর্য়াদনপেতমীশ্বরময়ং লোকেহতং সেবতে

তং গচ্ছন্তামু যে বিপত্তিষু পুনস্তে তং প্রতিষ্ঠাশয়া ॥

ভক্তত্বার্থে প্রলয়েহপি পূর্বস্মকৃতাসঙ্গেন নিঃসঙ্গয়া

ভক্ত্যা কার্যধুরাঃ বহন্তি কৃতিনস্তে দুর্লভাস্তাদৃশাঃ

(b) স্বচ্ছন্দমেবচরমুজ্জলদানশক্তিম্

উৎসেকিনা বলমদেন বিগাহমানম্ ।

বুদ্ধা নিগৃহ্য বৃষলস্ত কুতে ক্রিয়ায়াম্

আরণ্যকং গজমিব প্রপ্তগীকরোমি ।

(c) পৃথিবাং কিং লক্ষাঃ প্রণিতকুলজা ভূমিপতয়ঃ

পতিং পাপে মৌযাং যদপি কুলহীনং কৃতবতী ।

প্রকৃতা বাকাশপ্রভবকুম্ভমপ্রাপ্তচপলা

পুরুষাণাং প্রজ্ঞা পুরুষাবিজ্ঞানবিমুখী ॥

(d) তীক্ষ্ণদৃষ্টিভজতে মৃদৌ পরিভবজাসন্ন সন্তিষ্ঠতে

মূৰ্খান্ দ্বেষ্টি, ন গচ্ছতি প্রণয়িতাস্তবিকং স্বপি ।

শূরেভ্যোপাহবিকং বিভেতুাপসত্যোক্তান্তীক্ষ্ণনহা

শ্রীলক্ষ্মণস্নেহে বেষবনিতা দুঃপোপচর্যা ভূশম্ ॥

(1) Who is the speaker in extract (c)? Name and expound the Samasas in lines 3 and 4.

(2) In extract (d) account for the fifth case ending in তীক্ষ্ণাং. Account for the আয়নেনপদীয় form in সন্তিষ্ঠতে। Give the third person singular in লিট্ of দ্বিষ্ in the active voice.

3. Give the substance of any two of the following extracts in your own Sanskrit :—

(a) শিখাং মোক্তুং বদ্ধামপি পুনরয়ং ধাবতি করঃ

প্রতিজ্ঞামোরোচং পুনরপি চলত্যেব চরণঃ

প্রণাশানন্দানং প্রশমমমুযাতং ভ্রমধূনা

পরীতঃ কালেন জলয়সি পুনঃ ক্রোধদহনম্ ।

(b) আযাজ্ঞয়েব মম লজ্জিতগৌরবস্ত

বুদ্ধিঃ প্রবেষ্টুমবনেবিবরং প্রবৃত্তা

যে সত্যমেব ন গুরুন্ অতিমানয়ন্তি

তেষাং কথং নু হৃদয়ং ন ভিনন্তি লজ্জা ॥

(c) কার্যোপক্ষেপমাদৌ তনুমপি রচয়ন্তুস্ত বিস্তারমিচ্ছন্

বীজানাং গর্তিতানাং ফলমতিগহনং গৃঢ়মুদ্ভেদয়ন্ত

কুর্শন্ বুদ্ধা বিমর্ষং প্রসুতমপি পুনঃ সংহরন্ কার্যাজাতম্

কর্তা বা নাটকানামিমমুভবতি ক্লেশমস্বাধিগো বা

4. অশ্লষ্ট। কৃতকলহং কৃৎ। স্বতন্ত্রেণ চ ময়া কক্ষিং কালং ব্যবহৰ্তব্যমিত্যৰ্যোপদেশঃ স চ কথমপি ময়া পাতকমিবাভ্যুপগতঃ অথবা শব্দাৰ্যোপদেশসংক্রিয়মাণমতয়ঃ সদৈবাস্বতন্ত্রা বয়ম্।

Was the quarrel between চন্দ্রগুপ্ত and চাণক্য referred to in the above lines real or was it merely simulated? What purpose was it meant to serve? Give your answer either in English or in Sanskrit. Account for the second case ending in কালম্।

5. Give the substance of any two of the following extracts in English with clear reference to the context in each case :—

- (a) মেদশ্ছেদকৃশোদরং লঘু ভবতুতসাহবোগাং বপুঃ
সত্বানামপি লক্ষ্যতে বিকৃতিমচ্ছিত্তং ভয়ক্ৰোধয়োঃ।
উৎকৰ্ষঃ স চ ধম্মিনাং যদিষবঃ সিধ্যন্তি লক্ষ্যে চলে
মিথ্যা হি বাসনং বদন্তি মৃগয়াসীবমৃগ বিনোদঃ কৃতঃ।
- (b) যাস্তত্যাগ শকুন্তলেতি হৃদয়ং সংস্পৃষ্টমুৎকণ্ঠয়া
অস্তবাস্পিভারোপরোধি গদিতং চিন্তাজড়ং দর্শনম্।
বৈষ্ণবাং মম ভাবদীদৃশমপি মেহাদরণ্যোকসঃ
পীড্যন্তে গৃহিণঃ কথং হু তনয়াবিল্লোষভুঃথৈন বৈঃ।
- (c) রমাণি বীক্ষ্য মধুরাংশ নিশমা শব্দান্
পশুংস্মকো ভবতি যং স্মৃতিতোহপি জন্তুঃ
অচেতসা স্মরতি সুনমবোধপূৰ্ব্বং
ভাবস্থিরাণি জনানান্তরসৌন্দর্যানি।

(1) Name and expound the samasas in মেদশ্ছেদকৃশোদরম্ in extract (a).

6. Translate any two of the following extracts into English —

(a) সাধু বৃষল সাধু, মমৈব হৃদয়েন সহ সন্মুখ্য সন্নিষ্টবানসি। (প্রকাশম্) শোণোত্তরে
উচ্যতামশ্রুচনাং বৃষলঃ সাধু বৎস সাধু, অতি জবঃ খল্বসি লোকবাবহার্যাণাং, তদনুগীতামান্ননো-
হতিপ্রায়ঃ কিন্তু পার্বতেখরধূতপূৰ্ণাণি ভূষণানি গুণবন্তি গুণবস্তা এব ত্রাক্ষণেভ্যঃ প্রতিপাদনীয়ানি,
তদেমেহং স্বয়ং পরীক্ষিতগুণান্ প্রেষয়ামি।

(b) প্রাক্ চন্দ্রগুপ্ত প্রবেশাৎ প্রবিষ্টমাত্রেনৈব শয়নগৃহে চণ্ডকোন দুরাস্তনাসমস্তাদবলোকিতে,
ততশ্চেক্সান্তিস্তিচ্ছিত্তাং গৃহীতভক্তা বয়বানাং পিপীলিকানাং পংক্তিম্ অবলোক্য পুরুষ-গৰ্ত্তমেতদ্
গৃহমিতি গৃহীতার্থেন, দাহিতঃ তদন্ত শয়নগৃহম্। তস্মিংশ্চ দৃষ্টমানে ধূমাবরুদ্ধৃষ্টিবিষয়াঃ প্রথম-
প্রপিহিতনির্গমনমার্গমনধিগমা সর্ক এব বীভতংসাদন্ত্যেব জলনমুপগতা উপরতাশ্চ।

(c) যদি যথা বদতি ক্ষিতিপশুখা।

ত্বমসি কিং পিতুরুৎকলয়া ত্বয়া ।

অপি তু বেংসি শুচিব্রতমান্বনঃ

পতিগৃহে তব দাস্তমপি ক্ষমন্ ॥

(d) শুক্রবশ গুরুন্ কুরু প্রিয়সখীবৃত্তিং সপত্নীজনে

ভর্তৃবিপ্রকৃতাপি রোষণতয়া মান্ম প্রতীপং গমঃ ।

ভূয়িষ্ঠং তব দক্ষিণা পরিজনে ভোগেধমুৎসেকিনী

যাস্তোবাং গৃহীণীপদং যুবতয়ো বামা কুলশাধয়ঃ ॥

(1) In extract (d) give the third person singular of the root of শুক্রবশ in লিট্ in the passive voice. Derive সপত্নী. Correct or justify the expression গ্রামস্ত পতিরিয়ম ব্রাহ্মণী । Explain মান্মগম grammatically.

7. Render the following into Sanskrit :—

ভদ্র বিশ্বেবেহি মম বচনেন অমচং ন কেবলং অহং নপোাপজীবী পাউঅকরীপ ক্ অহং তা জই মম দংসপেণ অমচো পসাদং এ কেরোদি তা এদং পি পশুঅং বাচেহুং পসীদহুত্তি ।

8. Translate any three of the following extracts into Sanskrit :—

(a) The discovery was a thunderstroke to Othello, who now plainly saw that he was no better than murderer and that his wife (poor innocent lady) had been ever faithful to him ; the extreme anguish of which discovery was making life insupportable he fell upon his sword, and throwing himself upon the body of his dead injured lady, expired.

(b) About the time of Alexander's death, or a little late, a revolution took place in Magadha which costs unpopular Nanda King his throne and life. A young man named Chandragupta, who is said to have met Alexander at his camp and seems to have been related to the Nanda royal family, assembled a force of predatory class from the north and seized the kingdom of Magadha, the capital of which was Pataliputra, the modern Patna. His agent in effecting the revolution was Chanakya, otherwise called Kautilya or Vishnugupta, a wily Brahmin who became his minister.

(c) At the close of a battle, a soldier of the victorious army chanced to find a small boy on the field, and very much from the habit of assulting whatever came in his way, lifted his sword to cleave him down, when, the little fellow, looking up in his face exclaimed 'Oh, Sir, don't kill me, I'm so little.' That simple appeal went to the warrior's heart ; and returning his sword into the scabbard he galloped away without harming the child.

(d) The flames roll'd on—he would not go
 Without his father's word.
 That father, faint in death below
 His voice no longer heard,
 He called aloud, "Say, father, say,
 If yet my task is done,"
 He knew not that the chieftain lay
 Unconscious of his son.

SANSKRIT—PASS

Third Paper

1. Translate any *two* of the following passages into English :—

(a) কশ্মিঃশ্চিং অধিষ্ঠানে মিত্রশত্রু নাম ব্রাহ্মণঃ প্রতিবসতি অ। তেন কদাচিং মাঘমাসে সৌম্যানিলে প্রবাসি মেঘাচ্ছাদিতে গগনে মল্লং মল্লং প্রবৰ্ধতি পৰ্জন্তে পশুপ্রার্থনার্থং গ্রামান্তরে গচ্ছ। কশ্চিং যজমানো যাচিতি। ভোঃ যজমানঃ! আগামিত্যম্ অমাবস্তায়াম্ অহং যক্ষ্যামি যজ্ঞম্। তং যজ্ঞনার্থে দেহি মে পশুম্ একম্। অথ তেন শাস্ত্রোক্তং পীবরতনুঃ কৃড়া সত্বরং স্বপুৰাভিমুখং প্রতস্থে। অথ তন্ত গচ্ছতো মার্গে ত্রয়ো ধূৰ্ত্তাঃ ক্ষুংক্ষামকষ্ঠাঃ সম্মুখা বভূবুঃ। তৈশ্চ তাদৃশং পীবরতনুং পশুং স্বক্কে আকৃষ্টম্ অবলোকা মিথোহভিহিতম্। অহো! অস্ত্র পশোঃ ভক্ষণাৎ অজ্ঞতনীরো হিমপাতো বার্থতাং নীরতে।

(b) নমু ভোঃ কোহত্র নির্বকঃ কশ্চ বা তরলতাহেতুঃ। অনাকুলমুচ্যতাং শেষমপি ভরতো-মতম্। রাজাঃ ভবদ্বৌহিত্রস্তেব ন মমেতি নির্নীতম্ কিমপরং শুক্লমপেক্ষসে, তথাপি প্রদাতুং লজ্জা এব বয়ম্। নির্ভরমদীরয় ইতি সোপালানং পৃচ্ছতি কুমারে, হৃদীবরঃ প্রাজ্ঞলিরবাদীং রাজপুত্র, পুনঃ পুণর্বিষয়াসীতি কুহেদ মাবেচ্ছতে। অতো মান্ডুময়ি ক্রোধদৃষ্টিঃ প্রতিজ্ঞাতং ভবতা সত্যবতীপুত্রস্তেব রাজাং ন মমেতি, তন্তথৈব। ন তত্র মনাগপি বিপর্যাসঃ স্তাৎ। কিং ত্বেবা প্রতিজ্ঞা দ্বামেবোপকরণি, ন তু তবায়জ্ঞানপি! অধিকতরং ভেতব্যমেতেভাঃ। যদেতে কুমারা মনোজবসাঃ সন্তোভবানিব বীরগণনাম্ প্রথমে ভবেয়ুঃ।

(c) তো চ পুত্রসমাগমং প্রাপ্য পরমানন্দং অধিগতো। ততো রাজ্ঞো বহুমত্যাশ্চ দেব্যাঃ সমর্থং বামদেবো রাজবাহনপ্রমুখানাং দর্শনাম্ অপি কুমারাপাম্ অভিলাষং বিজায় তান্ আজ্ঞাপয়ং ভবন্তুঃ সর্ব্বেহপি একবারং গচ্ছ। স্বানি স্বানি রাজ্যানি শ্রায়েন পরিপালয়ন্ত পুনরদা ইচ্ছা ভবতি তদা পিত্রোশ্চরণাভিবন্দ্য আগন্তব্যম্ ইতি। ততস্তে সর্ব্বেহপি কুমারান্তমুনিবচনং শিরঙ্কি আধায় তং প্রথম পিতরো চ নত্যা দিগ্বিজয়ং বিধায় প্রত্যাগমনান্তে স্ব স্ব নৃত্তং পৃথকপৃথক্ মুনিসমক্ষে শ্রবেদম্। পিতরো চ কুমারানাং নিজবিক্রমাববোধকানি অতিদুর্ঘটানি চরিতানি আকর্ণ্য পরমানন্দম্ আগমুতাম্।

2. (a) Apply the rules of *sandhi* to *two* of the following pairs of words :—

द्विहितः + बाहि ; सपे + ईदृशि ; and अद्री + एते ।

(b) Decline *three* of the following words :—

अकिस् in the nominative case in all genders ; पथिन् in the objective case ; युद्ध् in the ablative (अपादान) ; त्री in the genitive case (सम्बन्ध) ; अत्राच् in the locative case (अधिकरण) ।

(c) Give the feminine forms of *three* of the following words :—

युवन्, पृच्छन्, रुद्र कृशाङ्ग and वृद्ध ।

3. Correct or justify three of the following sentences :—

(a) व्याघ्राः भृगान् प्रनिहन्ति ।

(b) शुभ्रवस्ति शुक्लं शिखाः ।

(c) ते पितृवसा दिवं गतः ।

(d) स नावा सङ्गरति ।

(e) विरमन् असं कर्मणः

4. Either, (a) Form the compound words (samasas) out of the following :—

प्रियः सपा वृत्त सः । त्रयाणां लोकानां समारोहः and शोभने गङ्गा यस्या सः ।

(Or, Expound the *samasas* in *three* of the following :—

विपथम् ; पुरुषायुषम् ; पद्मनाभः , गोमहिषम् ; अमूरुपम् ।

(b) Give the superlative forms (with the suffix ईष्ट) of any *three* of the following words :—

प्रिय, वृद्ध, दीर्घ, अशुभ and वर ।

5. Conjugate the following roots :—

वस् or अष् in *Lun* ; अ or ग्रह् in *Lit* ; and अस् or शस् in *lot* third person only.

6. Derive any *three* of the following words :—

मित्र, ईश्वर, कामः, ब्राह्मणः and दक्षिणातः ।

7. Frame sentences to illustrate the use of any *three* of the following words :

जघत्, अग्रहीवत्, युष्मानः, विप्रदर्शः and भिह्वः ।

8. Discuss the date of Ramayana.

Or, Ascertain the age of poet Kalidasa.

9. Write short notes on the following authors and works :—

(a) *Either*, Kumarila or Bhartṛihari.

(b) *Either*, Bharabi or Somadeva.

(c) *Either*, Vetala-panchavimsati or Prabodhachandrodaya
and—

(d) *Either*, Mahanataka or Ckourapanchasika.

1913

SANSKRIT—PASS

First Paper

1. Translate any two of the following extracts into English :—

(a) स किं सथा साधु न शान्तिं योऽधिपः

हितान्न यः संशुभ्रते स किं प्रभुः ।

सदानुकूलेषु हि कुर्वते रतिं

नृपेष्मतायेषु च सर्वसम्पदः ।

(b) निसर्गदुर्बोधमबोधविक्रवाः

कं दुपतीनां चरितं कं जल्लवः ।

तवानुभावोऽयमवेदि यमया

निगूढतन्त्रं नयवन्नविधिबान् ।

(c) हृत्थेन लभ्या दधतः कृषीबले-

रक्तपचा इव शक्तसम्पदः

वितर्कति क्षेममेवमातृका-

क्षिराय तस्मिन् कुरवश्चासति ।

(d) भवान्शेषं प्रमदाज्जनोदितः ।

भवताधिकेप इवानुशासनम् ।

तथापि बलं व्यवसाययन्ति मां

निरस्तनारीसमया दुराधयः ।

(e) বিজিত যঃ প্রাজ্যমবচ্ছত্তরান্

কুরুন্থকুপ্যং বহু বাসবোপমঃ ।

স বক্রবাসাংসি তবাধুনা হরন্

করোতি মন্থাং ন কথং ধনঞ্জয়ঃ ।

(1) In extract (a), name and expound the samasa in किंस्था । Give any other similar examples. What is the difference in meaning between किंस्था and किंस्थः ? Account for the Atmanepada form in संशुभ्रुते । Account for the fifth case ending in हितार्त् । Parse साधु ।

(2) In extract (b), account for the masculine gender in अयम् । Derive अनुभावं । State if it is a compound word or not. Give your reason. Give the 3rd person singular of the root of अवेदि in lun and lit in the active voice. Give the technical meaning of नयवस्त्र ।

(3) In extract (c), give the 3rd person singular of the root of दधत् in lit and lun. Derive कृषीवलैঃ and अकृष्टपट्या । Explain the samasas in अदेवमातृकाং । Give the 3rd person singular of the root of चकासति in lat. Account for the 3rd case-ending in ह्येन ।

(4) In extract (d), derive ভবাদৃশ, and account for the long vowel in it. Expound the samasa in প্রমদাজনোদিতম্ and derive the last word of the compound. Give the 3rd person singular and plural of the root of অনুশাসনম্ in lat.

(5) In extract (e), what is meant by উত্তরান্ কুরুন্ ?

2. Fully explain any one of the following extracts in Sanskrit after the manner of Mallinatha, referring to the context in each case :—

(a) ভবন্তমেতর্হি মনস্বিগর্হিতে

বিবর্তমানং নরদেববর্তনি ।

কথং ন মন্থার্জলয়ত্বাদীরিতঃ

শমীতরুং গুরুমিবান্নিরুদ্ধিধঃ ।

(b) পুরাধিরূঢ়ঃ শয়নং মহাধনং

বিবোধ্যসে যঃ স্তুতিগীতিমঙ্গলৈঃ ।

অদভ্রদর্ভামধিশায়াং স স্থলীং

জহাসি নিজামশিবৈঃ শিবাক্রুতৈঃ ।

- (c) পরিণামমুখে গরীয়সি ব্যর্থকেহস্মিন্ বচসি ক্তিতোজসীম্ ।
অতিবীৰ্য্যবতীৰ ভেষজে বহররীয়সি দৃশ্যতে গুণঃ ॥
- (d) ইয়মিষ্টগুণা রোচতাং রুচিরার্থা ভবতেহপি ভারতী ।
নমু বক্তবিশেষয়নিঃস্পৃহা গুণ-গৃহা বচনে বিপশ্চিত্তঃ ॥
- (e) অভিবৰ্ধতি বোহুপালয়ন্ বিধিবীজানি বিবেকবারিণা ।
স সদা ফলশালিনীং ক্রিয়াং শরদং লোক ইবাধিত্তিষ্ঠতি ॥
- (f) স্পৃহণীয়গুণেমহাস্বভিষ্চরিতে বন্ধ নি যচ্ছতাং মনঃ ।
বিধিহেতুরহেতুরাগসাং বিনিপাতোহপি সমঃ সমুন্নতেঃ

In extract (d), account for the present tense in বিবোধসে ।

3. Explain any two of the following slokas from Manu after the manner of Kulluka :—

- (a) বেদোখিলো ধৰ্ম্মমূলং স্মৃতিশীলে চ তদ্বিদাং ॥
আচারশ্চৈব সাধুনামান্ননস্তত্তিরেচ চ ॥
- (b) বেদে স্মৃতিঃ সদাচারঃ যশ্চ চ প্রিয়মাস্তনঃ ।
এতচ্চতুর্বিধং প্রাচ্যঃ সাক্ষাৎকল্পস্ত লক্ষণম্ ॥
- (c) নাপৃষ্টে কস্তচিদ্ব্যয় চাশ্চায়েন পৃচ্ছতঃ ।
জানন্নপি হি মেধাবী জড়বলোক আচরেৎ ॥
- (d) অল্পং বা বহু বা যশ্চ শ্রুতস্তোপকরোতি যঃ ।
তমপীহ গুরং বিদ্যাস্তোপক্রিয়য়া তয়া ॥

4. Explain the following words as used in the Manusamhita :—
আচার্য্য, উপাধ্যায়, ঋত্বিক, স্বাধ্যায়, ব্রাত্য ।

5. What are the duties of a ব্রহ্মচারী as enjoined by Manu ?

6. Translate the following extract from Kulluka into English :—

পাদোসংগ্রহঃ কার্যমিতানন্তরমুক্তং তদ্ব্যতাস্তপাণিনা কার্যমিতি বিধীয়তে । কৌদৃশো
বাতাসঃ কার্য ইত্যত আহ—সর্বোদ্যোগাণি সৰ্বাঃ পাদো দক্ষিণেন পাণিনা দক্ষিণঃ পাদো গুরো
স্ত্রৈব্যাঃ । উত্তানহস্তাভ্যাং চেৎ পাদয়োঃ স্পর্শনং কার্যম্ । বদাহ পৈঠিনসিঃ । উত্তানাভ্যাং
হস্তাভ্যাং দক্ষিণেন দক্ষিণং সৰ্বাং সর্বোদ্যোগাণি পাদাবভিবাদয়েত্ ॥

7. What in your opinion is the position of Manu in Hindu society as a ধৰ্ম্মশাস্ত্রপ্রয়োজক ? Mention the names of other codifiers of Hindu law that may occur to you. What is ঐতি and what is স্মৃতি ? Quote Kulluka in support of your answer.

8. Translate any one of the following extracts into Sanskrit :—

(a) How did men first measure time ? We can picture to ourselves how ancestors turned their eyes in wonder to the great sun ;

how they watched him rising higher and higher till he reached his noonday strength, then sinking lower and lower untill he disappeared beneath the western horizon and left the world to darkness.

The great sun has sunk to rest, but in his place have come the gentle moon and thousands of stars. But again the sun rises, shines and sets. Again he is followed by moon and stars. Man's first lesson in time has now been learned; the light he calls the day, the darkness the night.

(b) How pleasant it is to live with those who are always kind and cheerful and obliging. Such persons seem to carry a perpetual sunshine about them, wherever they go, they make smiling faces and happy grateful hearts. Should we not all be anxious to learn thus to diffuse happiness among our friends and acquaintances? The secret of this is to think of others more than we do of ourselves.

True politeness springs from a kind and loving heart. The true lady and gentleman are those who are kind to every one they meet. Thus the poorest man can be a true gentleman, and poorest woman a true lady.

SANSKRIT—PASS

Second Paper

1. (a) Explain in Sanskrit, with reference to the context, two of the following passages :—

(1) रम्यास्तुरः कमलिनीहरितः सरोजिः—

छायाद्रमैर्नियमितार्कमरीचितापः ।

भूयां कुशेशयरजोमृदुरेणुरताः

शान्ताभुकूलपवनश्च शिवश्च पञ्चा ॥

(2) महाभागः कामं नरपतिरभिनिष्ठितिरसौ—

न कश्चिद्वर्णानामपथमपकुटोहपि भजते ?

तथापीदं शब्दं परिचितविबिक्तेन मनसा—

जनार्कीर्णं मञ्जे ह्रतवहपरौतं गृहमिव ।

(3) सिधास्ति कर्णम् महत् क्षपि यन्नियोजाः

संभावनाशुभमवेक्षि तमीधराणाम् ।

किं बाधविशदक्षपुस्तमसां विभेदा

तं चेत् सहस्रकिरणो धुरि नाकरिण्यम् ।

(b) Expound the Samasas in the words underlined in extract (1).

(c) Give the plural number of the form of the word underlined in extract (2)

(d) Derive the word underlined in the first line of extract (3). Is the word capable of having another form and if so, will it make any difference in the meaning? In the same extract, account for the case ending and expound the Samasa respectively, in the words underlined in the third and fourth lines.

2. (a) Give the substance of the following :—

যত্বেতি বর্ণেভ্যো নৃপাণাং ক্ষয়ি তক্ষনম্ ।

তপ্ বড়্ ভাগমক্ষয়ং দদতারশ্যাক্ষা হি নঃ ॥

(b) Why is there no Atmanepada form in উত্তিষ্ঠতি? Expound the Samasa in বড়ভাগং । Give the derivation of the word underlined.

3. (a) Explain in Sanskrit two of the followings passages :—

(1) অশেষৈবো যদি ভুবনে ভূতনাথঃ শরণ্যো

মামম্বিষ্মিহ বৃষলকং যোজনানাং শতানি ।

ক্রাস্তা প্রাপ্তঃ স ইহ তপসাং সংগ্রাসাদোহম্ভা চেষ

কাষোধ্যায়াঃ পুনরুপগমো দণ্ডকায়ং বনে বঃ ॥

(2) ইদং বিশ্বং পাল্যং বিধিবদভিযুক্তেন মনসা

প্রিয়শোকো জীবং কৃষ্ণমমিব ঘর্ষণং ক্লময়তি

স্বয়ং কৃষ্ণা ত্যাগং বিলপনবিনোহপাস্থলভ—

সুদতাপুচ্ছাসো ভবতি নম্র লাভো হি কদিতম্ ॥

(3) ত্রাতুং লোকানিব পরিণতঃ কায়বানন্তবেদঃ

ক্ষাত্রো ধর্মঃ শ্রিত ইব তনুঃ ব্রহ্মকেশস্ত গুপ্তো ।

সামর্থ্যানামিব সমুদায়ঃ সংজয়ো বা গুণানাম্

আবির্ভূরস্থিত ইব জগৎপুণ্যানির্দ্বাপরাশিঃ ॥

(b) Account for the suffix ক in বৃষলকং in (1)

(c) Parse স্বয়ং in (2) and conjugate the roots of the words underlined in the last line of that passage in the third person singular of lan and lun.

(d) Does the word তনুঃ in (3) admit of any other form? Derive: নির্দ্বাপ ।

4. কঙ্কী । নুনং ক্ষত্রিয়ব্রহ্মচারী দারকোহয়মিতি মন্ত্বে । জনকঃ । এবমেব তথাহি ॥

চূড়াচুম্বিতকঙ্কপত্রমভিতপ্তু গীষ্ময় পৃষ্ঠতো

ভস্মস্তোকপবিত্রলাঞ্ছনমূরো ধন্তে হচং রোরবীম্ ।

মৌর্য্য মেখলয়া নিয়ন্ত্রিতমধোবাসন্ত শাস্ত্রিতিকং
পার্শো কান্দু কামক্ষত্বেবলয়ং দণ্ডং তথা পৈপালম্ ॥

How do the facts mentioned by Janaka support the surmise of the Kanchukin ? Give authorities for your answer.

5. Translate any two of the following passages into English :—

(a) বিতরতি গুরুঃ প্রাজ্ঞে বিভাং যথৈব তথা জড়ৈ
ন তু খলু তয়োজ্ঞানে শক্তিং কৰোতাপহস্তি বা ।
ভবতি চ পুনর্জ্ঞান ভেদঃ ফলং প্রতি তদ্বথা
প্রভবতি গুচিবিষোদাগ্রহে মনির্গ মুদাং চয়ঃ ॥

(b) একো রসঃ করুণ এব নিমিত্তভেদা—
স্তিরঃ পৃথক্ পৃথগিবাশ্রয়তে বিবর্তান্ ।
আবর্তবুদ্ভুদন্তরঙ্গময়ান বিকারা
নন্তো তথা সলিলমেব তু তং সমগ্রম্ ॥

(c) যাতোকতোহন্তশিখরং পতিরোযধীনাম্
আবিষ্টারুণপূরঃসরঃ একতোহর্কঃ ।
তেজোময়স্ত যুগপদ্ব্যাসনোদয়াভ্যাং
লোকো নিয়মাতে ইবৈষ দশান্তরেব ॥

6. (a) Translate the following passages into Sanskrit :—

সহজে কিলাজে বিনিমিমে ৭ হু সে কর্ণ বিবজ্জণোঅত ।
পম্ভমালণকর্ষদালুণে অরুকম্পামিদ্ধকেবি সেত্তি এ ।

(b) Explain the reason by which the speaker means to justify his conduct.

7. From what original source was the plot of the Uttaram-charita derived ? Has the author made any departure from the original ? If so, why ?

8. Translate the following into Sanskrit :

(a) The hermit heard with high content
That speech so won'rous eloquent,
And while each hair with joy arose,
He thus made answer at the close :
Good is thy speech, O noble king,
And like thyself in every thing.

So should their lips be wisdom fraught
Whom kings begat, Vasistha taught.
The favour which I came to seek
Thou grant ere my tongue can speak.
But let my tale attention claim,
And hear the need for which I came.'

(b) There was a certain foolish son of a Brahman, to whom his father said one evening :—"My son you must go to the village early tomorrow." On hearing this, he set out in the morning, without asking his father what he was to do. Going to the village without any object, he came back in the evening fatigued. He then said to the father, I have been to the village. 'Yes, but you have done no good by doing so,' answered his father. Thus a fool, who acts without an object becomes the laughing-stock of people generally ; he suffers fatigue, but does no good.

SANSKRIT—PASS

Third Paper

1. Give a concise account of Henry Thomas Colebrooke as a pioneer of Sanskrit studies.

2. (a) Write notes on the following works :—

Harivamsa, Brihat samhita, Hanuman-nataka, Brahma sutra and Rajatarangini.

(b) Write notes on three of the following authors :—Somadeva, Bhababhuti, Bhartihari, Sriharsa and Asvaghosa.

3. (a) Give some account of Sanskrit prose literature.

(b) Discuss the genetic connexion, if any, between the dramatic literature of India and that of Greece.

4. Apply the rules of Sandhi in any three of the following :—

হরে আয়াহি ; তব ওষ্ঠ ; মহান্ শব্দ ; জাতঃ এহি ; হরি রাজতে ।

5. (a) Decline গো in the objective case. অদস্ in the instrumental case, অদস্ in the dative case, and ধী in the possessive case.

(b) Conjugate সদ্ in lat, অস্ in lun, জি in lit, and ক্রস্ in lun.

6. (a) Give the causative (পিজস্ত) forms of the following roots :—

ঈ, ভী and পা ।

(b) Give the desiderative (সনস্ত) forms of the following roots :—জি, বৃথ, and য় ।

(c) Substitute single words for the following :—

সখা ইব আচরতি ; সখায়মিব আচরতি ; বৈরং করোতি ; দৃঢ়ং করোতি ।

7. (a) Derive four of the following words :—

জগ্ৰিবস্, আভঃ, রজকঃ, বাতকঃ, জিহ্বর, পরিচর্যা ।

(b) Give the feminine forms of three of the following words :—অথ, যবন, মুহু, স্বকেশ ।

(c) Expound the samasas in any three of the following :—

ঈশ্বরাদীন, দুর্দ্বেধাঃ, স্বগন্ধি, রম্যপথঃ, পরোক্ষম্ ।

8. Correct or justify the following :—

(a) মুগং বাদন্তে সিংহঃ ।

(b) নংগচ্ছতে মিত্রম্ ।

(c) অধিষ্ঠিতং বৈকুণ্ঠে হরিঃ ।

9. Translate any two of the following extracts into English :—

(a) একদা রাজা তীর্থস্থানায় গচ্ছন্ কিরতিপন্নীমার্গে কয়াচিহ্নপাপাভিতমেকং স্কৃক্ৰমাবন্ কুমারম্ অবলোক্য তানবানীং । ভজে কোহয়ং বালঃ কস্য বা নয়নানন্দঃ । কেন বা নিমিত্তেন দীন ইব লক্ষ্যতে ! তয়া সপ্রণামমভিহিতম্ । মহাশ্মশ্রুশ্চিহ্নম্ মার্গে গচ্ছতঃ শত্রুতেজসো মিথিলেখরস্য বা সর্কলম্ অপহরতি শবরসৈন্তো মন্দয়িতেনাপহৃত্য বালোহয়ং মহম্ অপিতঃ এনংশ্চ সযত্নং লালতে । রাজা তদাকর্ণ্য মুণিকথিতং দ্বিতীয়ং রাজকুমারং দেবৈ নিশ্চিতা সামদানান্ভ্যাং তাং শবরীং সংতোষাপহারবর্নানামং কৃষ্ট্বা দেবৈ সমর্পয়ামাস ।

(b) আসীৎ পুরা চিত্রকূটাখ্যে পর্বতে পরমরূপবান্ যুবা কশিচ্ নরপতিঃ স্বগেণো নাম । সতু তস্মিন্বেব মহীষ একমতিরমণীয়মুত্থানং প্রস্তুতমকরোদ যেন দিবং নন্দনকাননমপি বিদ্বার্যাতে । তত্রোপবনে কমলসন্তানসুশোভিতা রত্নালংকৃতসোপানরাজিবিরাজিতা কাপি দীর্ঘিকা নির্মিতা । রাজাসুরূপাং মহিষীং অলভন্ নিরন্তরমেব তদীয়ে তটেহবস্থানমকরোৎ । কদাচিত্ সুরসুন্দরী রম্ভা যদুদ্ধয়া বিহার্যসা গচ্ছন্তী তত্র কাননে পরিবর্তমানং স্তবেণমজ্রাক্ষীং ব্যাচিস্তয়চ্চ তদীয়েন রূপরাশিনা বিমোহিতা । অহম দৃষ্টপূর্কঃ কদাপ্যেবংবিধো রূপবান্ ।

(c) গঙ্গা চ সা হেমপ্রভেকাকিনী দূরং বনং বিরচিতোটজফলমুলাশিনী হরারাদনতংপ্ররা তপশ্চচার । তংপিতাপি স রাজা ক্কাপি গতং বিদিত্বা সমস্তাদ্ অধিব ন চ প্রাপ্ত প্রাপ চ মহৎ দুঃখম্ । অচিরাস্ত চ দুঃখং বিনোদিতং যুগলার্থং বনমগমত্ যত্র চ যুগানদ্বিবান্ ভ্রমংশ্চ সহসা স্তম্ভং বনাস্তরমাসাদ যত্র সা হেমপ্রভা তপস্যন্তী ব্যতিষ্ঠত রাজা ভ্রাতোটজং দৃষ্ট্ৱা সত্যং পাদযোর- পতত্ । পিতা তামালিন্দ্র্য সাশ্রুকে স্তবেশয়ত । তৌ চাস্তোস্তং দৃষ্ট্ৱা তথা রুদ্ধদর্ভা তত্রতা স্তুগা অপ্যদশ্রবেহভবন্ ।

1914

SANSKRIT—PASS

First Paper

1. (a) निसर्गद्वयोपसर्गविग्रहाः ।
 कं भूपतिनां चरितं ? कं जम्बवः ?
 त्वामुत्तमोऽयमवेदि यन्मया ।
 निगूढतद्वं नयवञ्च विधिनाम् ।
- (b) उदारकीर्तयस्व दयावतः
 प्रशस्तवाचं दिशतोऽहिरक्या ।
 श्वयं प्रदुक्तेऽस्तु श्वैरुपसृता—
 वसुपमानस्तु वसुनि मेदिनी ।
- (c) पुराधिकृतः शयनं महाधनम्
 विबोधसे यः स्तुतिगीतिमङ्गलैः
 अद्वयदर्शमधिशयां स ह्यली
 जहासिनिज्जामशिवैः शिवारुतैः ।
- (d) पुरःसरा धामवतां यशोधनाः
 हृदयसहं प्राप्य निकारमौदशम् ।
 उवाच शाल्यश्चैव दिव्यं रतिं
 निराश्रया हस्तहता मनश्चिता ।

(1) Explain two of the above passages in Sanskrit with reference to the context.

(2) Explain the absence of वङ् in निसर्गः and comment on अनुत्तम in (a),

(3) In extract (b) derive प्रशस्त and conjugate the roots of प्रदुक्ते and उपसृता in लृट् third person singular.

(4) In extract (c) give the forms in लृट् and लिट् third person singular of the root of विबोधसे ; expound the samasas in स्तुतिगीतिमङ्गलैः and conjugate the root of the words underlined in लिट् and लृट् second person singular

(5) In extract (d) account for the atmanapada form in অধিকুৰ্বতে ।

2. (a) ক্ষরযুক্তমপি স্বভাবজং দধতং ধাম শিবং সমুদ্বয়ে ।
প্রথমস্তানপায়মুখিতং প্রতিপচ্ছন্দ্রমাং প্রজাঃ নৃপম্ ।
- (b) অবিতৃপ্ততয়া তথাপি মে হৃদয়ং নির্ণয়মেব ধাবতি ।
অবসায়য়িতুং ক্রমা স্তবং ন বিধিয়েষু বিশেষ সম্পদঃ ।
- (c) অপরাগসমীরণেরিতঃ ক্রমশীর্ণাকুলমূল সন্ততিঃ ।
হৃকরন্তরুবতঃসহিকুণা রিপুণ মূলয়িতুং মহানপি ॥

- (1) Translate two of the above passages into English.
(2) Comment on the word underlined in (a) and decline the base of the words underlined in (b) in the second case ending.
(3) Scan the metre in extract (c).

3. (a) ঋতিবৈধস্ত যত্র স্যান্ত্রথর্ষাবুভৌ ।
উভাবপি হি তৌ ধর্মৌ সম্যগুভৌ মণীষিভিঃ ।
- (b) একাদশং মনো জ্ঞেয়ং স্বগুণেনোভয়াক্রমম্ ॥
যস্মিন্ জিতে জিতাবেতৌ ভবত পঞ্চকৌ গর্গৌ ॥
- (c) য স্বাধ্যায়মধীতেহং বিধিনা নিয়তঃ শুচিঃ ।
তস্য নিত্যং ক্ষরতোষ পয়োদধিযুতংমধু ॥
- (d) আ হৈব স নথাগ্রেভ্যঃ পরমং তপ্যতে তপঃ ।
যঃ শ্রদ্ধাপিষিজোহধীতে স্বাধ্যায়ং শক্তিতোহব্ধম্ ॥

- (1) Explain two of the above passages in Sanskrit.
(2) Change the voice of extract (d) and parse the word underlined.

4. (a) সর্বস্তসমবেক্ষ্যদং নিখিলং জ্ঞানচক্ষুষা ।
ঋতি প্রামাণ্যতো বিদ্বান স্বধর্মে নিবিশেত বৈ ॥
- (b) বিজ্ঞয়েব সমং কামং স্মর্তব্যং ব্রহ্মবাদিনা ।
আপতপি হি যোরায়াংনত্নমিরিণে বপেত ॥
- (c) সম্মানাত্রাক্ষণো নিত্যমুদ্বিজ়েত বিবাদিব ॥
অমৃতসোয চাকাঙ্কদবমানস্য সর্বদা ॥

- (1) Translate two of the above passages into English.

(2) Conjugate the roots of the words underlined in (a) and (b) in बुद्ध and लिङ् second person singular.

(3) Parse the words underlined in (c)

5. What is সদাচার according to Manu ? What determines precedence among the different members of each one of the Castes ? Does Manu permit the recitation of a Vedic text by a boy before he has been invested with the sacred thread ?

6. Translate two of the following passages into Sanskrit :—

(a) His bright Virtue removed the blot of his descent just as rubbing with the touch-stone removes the impurity attaching to a jewel when it comes from the mine. The gathering of the clouds produces clear water from the immensely impure smoke. Moreover, the shining fire takes its origin from the thoroughly dull water. In truth the character of the great does by no means conform to the place of their birth.

(b) “What am I ? Who has overcome me ? Where am I to-day ? Who attends me ? What have I now to do ? Such thoughts made him shudder again and again. ‘My Kingdom is lost ; my wives are burned ; my son has disappeared : I am alone without friends and provisions, rolling about in the court-yard of a beggar. When he thought of each one of these misfortunes, he could not even in stories find any one else who had sunk so low and was afflicted with grief equal to his own,

(c) Then Somaprabha bowed before his father, and marched out on an auspicious day, with his forces, for the conquest of the regions, mounted on the horse given by Indra. And by the help of his splendid horse, he conquered the Kings of every part of the world and being irresistible in might, he stripped them of the jewels. He bent his bow and the necks of his enemies at the same time, the bow was unbent again, but the heads of his enemies were never again uplifted.

SANSKRIT—PASS

Second Paper

Translate any four of the following extracts into English :—

(a) বা স্বষ্টিঃ স্রষ্টে রাজা বহতি

বিধিহন্তঃ বা হবির্বা চ হোত্রী

যে যে কালঃ বিশ্বন্তঃ স্রুতিবিসয়গুণা

বা স্থিতা ব্যাপ্য বিশ্বম্ ।

যামাহঃ সৰ্ববীজপ্রকৃতিরিতি

যয়া আগ্নিনঃ প্রাণবন্তঃ

প্রত্যক্ষাভি প্রপন্নস্তত্ত্বভিরবতু—

বস্তাভিরষ্টাভিরীশঃ ॥

(b) চিত্রে নিবেশ্য পরিকল্পিত-সঙ্কষণা—

রূপোচ্চয়েন মনসা কৃত্য নু ।

স্ত্রীরত্নমৃষ্টিরপরা প্রতিভাতি সা মে—

ধাতুর্বিভূত্বমুচ্চিয়া বপুষ্ট তস্যাঃ ॥

(c) বিচিস্তয়ন্তী যমনস্তমনসা—

তপোনিধিং বেৎসি ন মাম্পস্থিতম্ ।

অরিত্ততি ত্বাং ন স বোধিতোপি সন্

কথাং প্রমত্তঃ প্রথমং কৃতামিব ॥

(d) অশ্মান্ সাধু বিচিন্ত্য সংযৎনামুচ্চৈঃ কুলকান্ননঃ

স্বঘ্যান্যাঃ কথমস্তবাক্ষবকৃতাং মেহপ্রবৃত্তিক্ তাম্ ।

স মাগ্নপ্রতিপূর্বকমিয়ং দারেবু দৃষ্টা ত্বয়া—

ভাগ্যাদীনমতঃপরং ন খলু তদ্বাচং বধুব্ধুভিঃ ॥

(e) রম্যাণি বীজ্য মধুরাংশ্চ নিশম্য শব্দান্

পৰ্য্যাপ্তকো ভবতি যৎ স্থপিতোহপি জন্তঃ

তচেতসা অরতি নুনমবোধপূর্বম্

ভাবস্তিরাণি জননাস্তরসৌরুদানি ॥

(f) স্বপ্নো নু মায়া নু মতিভ্রমো নু ক্লিষ্টঃ নু তাবৎ ফলমেব পুণ্যম্

অসন্নিবৃজ্য তদতীতমেতে

মনোরথানামতটপ্রপাতাঃ ॥

(1) State in as few words as possible in your own Sanskrit the philosophical doctrine referred to যা স্থিতা ব্যাপ্য বিষম in extract (a). Account for the প্রথমা বিভক্তি in সৰ্ববীজপ্রকৃতিং and give any other similar example. Decline বিশ্ব in the 1st, 4th, 6th and 7th cases.

(2) In extract (b) give the 1st person singular of ভা in লিট্ and লুঙ্ ।

(3) In extract (c) explain the allusion in your own Sanskrit.

(4) Expound the samasgs in অবাক্ষবকৃত্যং, সান্নাত্তপ্রতিপত্তিপূর্বকম্ in extract (d). Parse the latter word.

(5) Explain the philosophical doctrine alluded to in extract (e)

(6) Account for the চতুর্থ বিভক্তি in অসম্মিত্বো in extract (f)

2. Explain any two of the following extracts in Sanskrit after the manner of মলিনাথ with clear reference to the context in each case

(a) অধৈতং স্তম্ভঃখ্যোরনুগুণং সর্বাধবস্থান্ যত্
বিশ্রামো হৃদয়স্ত যত্র জরসা যন্মিলাহার্যো রসঃ ।
কালেনাবরণাতারাত্ পরিণতে যত স্নেহসারে স্থিতম্
ভদ্রং প্রেম স্তমানুযন্ত কথমপ্যেকং হি তত্ প্রাপ্যতে ॥

(b) বিতরতি গুরুঃ প্রাজ্ঞে বিদ্যাং যথৈব তথা জড়ে—
ন চ খলু তয়োজ্ঞানে শক্তিং করোত্যপহন্তি বা ।
ভবতি চ পুনর্ভূয়ান ভেদঃ ফলং প্রতি তদ্ব্যথা
প্রভবতি গুচিবিষোদগ্ৰাহে মণিণ মৃদাং চয়ঃ

(c) অপতো যত তাদৃগ্ দুরিতমবত কেন মহতা—
বিবাক্তস্তীত্রেণ ত্রণিতহৃদয়েন ব্যথয়তা ?

(d) শিশুর্বা শিষ্যা বা যদসি মম তৎ তিষ্ঠতু তয়!—
বিশুদ্ধক্লান্তকর্ষস্বরি তু মম ভক্তিঃ জনয়তি ।
শিশুং স্ত্রীং বা ভবতু নমু বনচ্চাসি জগতাং
গুণঃ পূজাহানং গুণিণু ন চ লিঙ্গং ন চ বয়ঃ ॥

(1) In extract (d) who is the speaker and who the person addressed ?

3. বৃদ্ধান্তে ন বিচারণীয়চারিতান্তিষ্ঠ কিং স্ন্যতে ।
স্বন্দস্তীদেপ্যখণ্ডরশসো লোকে মহান্তো হি তে ।
যানি ত্রীণ্য পরাঙ্মুখাধাপি পদাঙ্কাসন্ খবারোধনে—
যন্তা কৌশলমিল্লস্বদমনে তত্রাপ্যভিজ্ঞো জনং ॥

Refer to the context and explain in English or in Sanskrit the bitter sarcasm on Rama's character in the above sloka.

Or, Is there any clear evidence in the উত্তররাষট্রিতম্ about the Vedic Scholarship of ভবভূতি ?

4. Turn the following extract into Sanskrit.

Refer to the context and add explanatory notes where necessary:—

৭ং পহাদা রতগী, তা সিধংসতগং পরিচআমি, অথবা লহ লহ উখিদাধি কিং করিস্ সং ? ৭
মে উইদেহুং পদাহকরগীহুং তথাপা আ পসবন্তি ! কামো দাগিং সকাকো ভোজ, জেগ অসকসকে
জনে পিঅসহী সুদধহিঅআ পদং কারিমা । অথবাণ তন্ন রাজসিনো ডুকাসাসাবো ক খু এসো
পহবদি । অনথা কথংসো রজিসো তাদিসাহ মত্তিঅ এত্তিঅস্ স কালস্ স বাস্তায়াত্তংবি ন বি
সজ্জদি ! তা ইদো অহিণাণংঅগুগী অং অং সে বিসজ্জন অথবা দুক্খসীলে তবসি সজ্জনে কো
অবমথীঅহু । ৭ং, স হীগামী দোসেত্তি কবসাহুং বি ৭ পাংরেহম । তাদকণশস্তং সউত্তলং
নিবেদিহুং তা এত্ত দানিং কিং নু ক্খু অহনেহি করণিজ্জং ।

5. Quote any sloka from the অভিজ্ঞান শকুন্তলম্ to show that the art of painting was in practice in ancient India.

6. ভবন্তি নব্রাস্তরবঃ ফলোদগমৈ—

নবাস্তুভিহুরবিলম্বিনো থনাঃ ।

অনুকৃত্যঃ সত্পুরুষাঃ সমৃদ্ধিভিঃ

ক্ৰতাব এবৈব পরোপকারিণাম্ ।

Amplify the idea contained in the above sloka into a very short essay in Sanskrit not exceeding 8 lines of your writing.

7. Translate into Sanskrit any two of the following extracts:—

(a) Whither they sailed, my children, I cannot clearly tell. It all happened long ago. So long that it has all grown dim like a dream which you dreamt last year. And why they went I cannot tell ; some say that it was to win gold. It may be so ; but the noblest deeds which have been done on earth have not been done for gold. No, children, there is a better thing on earth than wealth, a better thing than life itself : and that is to have done something before you die, for which good men may honour you and God, your father, smile upon your work.

(b) Long long ago there lived in the land which we call Greece, a race of brave men and beautiful women. They thought their own land the best and the fairest in the world ; and as they watched the sunsets and the rising of the moon and all the other beautiful things that nature showed them, they were filled with awe and wonder. So they said, 'There must be some mighty people living above us, who rule the sun and the moon and the stars and the oceans and the rivers and the woods and every thing else. And they called these mighty people Gods and Goddesses.

(c) A slight stir was now heard at the back of the hall and a low murmur went round among the guests who whispered to each other:—"The Queen ! The Queen !" And in she came softly with slow and stately step, Helen the fairest among all the highborn dames of Greece. Her wondrous beauty was now and then a shadow seemed to pass over her face like the ghost of an old sin long repented and forgiven.

(d) Now was the middle of night, when over half the world nature seems dead and wicked dreams abused men's minds asleep, and none but the wolf and the murderer was abroad. This was the time when Lady Macbeth waked to plot the murder of the King. She would not have undertaken a deed so abhorrent to her sex, but that she feared her husband's nature that it was too full of the milk of human kindness to do a contrived murder.

SANSKRIT—PASS

Third Paper

1. Translate the following extracts into English :—

(a) তন্মৈ চৈবমুত্তমঃ ; পরিতুষ্টান্তঃকরণোহপি কৃষ্ণঃ সত্যভামাম্ অমৰ্ষতাব্রোচনঃ প্রাহ,
“সত্যো! মমৈবাববাসনা নাহমেতাং, তন্তু দুঃস্বপ্নঃ সাহিষ্যো। নহি, অমূল্যজ বরপাদপং
ততঃকৃতনীড়াশ্রয়িণো বিহঙ্গা বধান্তে তদলমতর্থেমস্মত্, শোকপ্রেৰিতবাক্যপরিকরেন।”

ইত্যুক্ত্বা স্বারকমতো বলদেবমেকান্তে বাহুদেবঃ প্রাহ স্নগয়াগতং ত্রেনং অটব্যং স্নগপতির্জঘান।
সত্রাজিতোহপি অধুনা শতধ্বনা নিধনং প্রাপিতঃ। তদুত্তরাবিনাশান্তানিরুদ্ধমং আবয়োঃ সামাস্ত্রঃ
ভবিষ্যতি। তদুত্তিষ্ঠ, আরুহতাং রথঃ শতধ্বনিধনায়েত্তমং কুরু!” ইত্যভিহিত্যষ্টধা ইতি
সমধিচ্ছিতবান্।

(b) অশ্বিনীমণ্ডলে সকলরাজলক্ষণোপেতঃ রাজা সার্বভৌমঃ শূত্রকো নাম রাজাসীৎ।
একদাহম্বাভাগপরিবৃত্তস্ত পরিষদমবস্থিতস্ত রাজস্ত পুরষারিদেশান্তরাদাগতো একো রাজপুত্রঃ
পুত্রভাৰ্য্যাসমেতো বৰ্ত্তনানী দুঃস্বপ্নং দক্ষিণাপথসকাশাং সমাগত্য দৌবারিকমব্রবীৎ। ভো
দৌবারিক। মামরেহিরাজপুত্রভাৰ্য্যাসহায়ঃ শূত্রকমহাৰাজস্ত বশঃ শ্রদ্ধা বৰ্ত্তনানী সমাগতঃ তিষ্ঠামি।
মমবৃত্তান্তং রাজে বিজ্ঞাপয়। অদ্বৈতত্ প্রতীহারী রাজানং বিজ্ঞাপ্য দৌবারিকেন নীয়মানং
তমবলোক্য রাজা পপ্রচ্ছ কো ভবান্? কিমৰ্থমিহাগত্য মিলিত ইতি পৃষ্ঠো ক্রতে দেব। বীরবর-
নামা ক্ষত্রিয়োহস্ম। সেবাকাজ্ঞী সমাগত তিষ্ঠামি। রাজা বদতি কিং জীবনং কৰ্ত্তব্যং তদ্বদ।
বীরবরেশান্তঃ প্রতাহং স্ববর্ণশতকত্রয়ং দদাতু দেব! রাজাব্রবীৎ। অহো! অত্রানেকগুণবন্তঃ

নস্তি ! কেধামপি এতাবজ্জীবনং ন বিজ্ঞতে । তচ্ছ দ্বা বীরবরো নৃপতিমভিনন্দ্য চলিতঃ । ততঃ সাক্ষিবিগ্রাহিকেনোক্ত দেব । এতেন মা কাতরো ভব দিবসকতিপয়ং এতাবজ্জীবনং দদ্বা বীরবরং পরীক্ষ্যতাম্ বহলধনমপি বিনষ্টং ন ভবিষ্যতি ।

2 (a) Name the Sandhis in three of the following :—

আকর্ণয়ন্ + উৎসৃকঃ । মহান্ + তরঃ । বালিকা + এতে । কবী + ইমৌ ।

(b) Decline four of the following words :—

স্ত্রী in the objective case, অষ্টন্ in the instrumental case, পূম্ in the dative case, দৌৰ্ in the ablative case ; চতুর্ (feminine) in the genitive case and অদম্ in the locative case.

(c) Give the feminine forms of the following words :—স্বকেশ, অগ্নি, মমু, and সূর্য্য ।

3. (a) Substitute single words for the following :—

বাস্পম্ উষ্ণমতি ; আশ্রানং পণ্ডিতং মন্ততে যঃ সঃ ;
জনান একযতি যঃ সঃ , স্বয়ম্ৰাত্রোরপত্যং পুমান্ ।

(b) Conjugate five of the following roots :—

অস্ in বিধিলিঙ্ third person ; আস্ in লঙ্ third person ; হন্ in লোট্ second person ; শাস্ in লঙ্ third person ; কৃ in লুঙ্ first person ; মস্জ্ in লট্ third person ; and কৃষ্ in লোট্ third person.

(c) Derive four of the following words :—

ভাষণা শীতং, বিশ্বস্তরা, অবমাননা, and স্বকীয়ম্ ।

4 (a) Frame sentences to illustrate Vibhaktis that are used in connexion with the following :—

(b) Explain and illustrate Dvigu (দ্বিগু সমাস) ।

(c) Expound the samasas in three of the following :—

পদ্মগন্ধি ; তীর্থকাকঃ ; পরোক্ষম্ ; and পরস্পরম্ ।

5. Change the voice in the following :—

আর্য্য ! অন্ত্রাং পর্য্যামার্য্যবর্য্যঃ কুবেদগুণ্যামা বসতি, অগ্নি অহং তস্ত কস্তা । শরত সময়-

রঙে রাজ্য সমানাত্মনঃ পুনরপি বজ্রদ্বষ্টং স্বং গৃহমগাং । অচিরেণ চ তন্তাঃ স্বয়ং পতিতৈঃ
কলৈরপূৰ্ণ্যতে ভিক্ষাভাজনম্ ॥

6. Correct or justify three of the following :

- (a) অগ্নি কৰ্ম্মে তস্য মহং আগ্রহং দৃশতে ।
- (b) প্রিয়সখে শৃণুযে কেন পথেন তত্র গমিষ্যে ?
- (c) পাঠাদ্ বিরমতে শিষ্যঃ ; তপস্তপাতি তাপসঃ ॥
- (d) সো মিত্রং ক্রহতি, মনসা হিমালয়ায় গচ্ছতি ।

7. Either trace the development of the Prakrit dialects or give an outline of the story of Mahabharata.

8. (a) Write notes on five of the following authors :—

Kumarila, Asvaghosa, Harisena, Subandhu, Bilhana, Jayadeva, Ksemendra and Sridhara, Dasa.

(b) Write notes on five of the following words :—

Kavyadarsa, Raghavapandaviya, Setubandhe, Balaramayana, Prabodhachandrodya, Subhasitavali, Ratnavali and Caurapanchasika.

9. (a) Either name the eighteen Puranas or discuss the date of composition of the Ramayana.

(b) Discuss the age and authorship of Panchatantra.

10. Name some of the Indian works on astronomy and medicine.

1915

SANSKRIT—PASS

First Paper

1. (a) State the object and the scope of the law of Manu and why supreme authority is claimed for it.

(b) Who are fit to teach, and who are fit to be taught, the laws of Manu ? Cite authorities in support of your answer.

2. Explain in Sanskrit any two of the following texts :—

(i) তমসা বহুরূপেণ বেষ্টিতাঃ কৰ্ণাহতুনা

অন্তঃসজ্জা ভবন্ত্যেতে হৃৎকৃতঃখসমবিতাঃ ।

- (2) अतिसु वेदो विज्ञेयो धर्मशास्त्रवै श्रुतिः
ते सर्वार्थेष्वमीमांसे ताव्यां धर्मो हि निर्वर्तते ॥
- (3) आक्कुलान् पर्धुपासीनः पवित्रैश्चैव पावितः ।
प्राणायामैस्त्रिभिः पुतस्तत उक्कारमहति ॥

3. Translate any two of the following passages into English :—

- (1) यथर्तुलिङ्गान्यतवः श्रयमेवर्तुपर्याये ।
शानि शानातिपतस्तु तथा कर्माणि देहिनः ॥
- (2) न जातु कामः कामानामुपभोगेन शाम्यति ।
हविषा कृषवस्त्रैर्व भूय एवातिवर्द्धते ॥
- (3) यथा धनं धनित्रेण नरो वारिधिर्गच्छति ।
तथा श्रुतगतां विद्यां श्रुतधुरधिगच्छति ॥
4. निदानैमित्तिकानि तु आस्त्रज्ञानसहकारिण्यो मोक्षाय कलुषे ।

Discuss the proposition stated in the above extract and give the views of the different schools on the point.

5. State the arguments put forward by Bhima in support of immediate action and the answer to them given by Yudhishthira.

6. (a) Explain two of the following passages in Sanskrit after the method of Mallinath—

- (1) विशङ्कमानो भवतः पराश्रयं
नृपासनहोहिपि वनाधिवासिनः ।
द्वुरोरलरुद्धमजितां समीहते
नयने जेतुं जगतीं हृद्योदनः ॥
- (2) प्रलीनतुपालमपि हिरान्यति
प्रशंसदावारिधि मण्डलं भुवम् ।
स चिन्तयत्येव भिरुतयेव्यतीः
अहो ! दुरन्ता बलवन्निरोधिता ॥
- (3) उपजापसहान् विलज्जयन्
स विधाता नृपतीन् मदोद्धतः ।
सहते स जज्ञोपधःक्रिमां
किमु लोकाधिकधाम राजकम् ।

(b) Expound the samasas in the words underlined in (1); parse the words underlined in (2); Conjugate the roots of the words underlined in (3) in লোড়ি and লুড্ third person singular.

7. (a) Translate two of the following passages into English :—

(1) তদাশু কৰ্ত্ত্বয়ি জিহ্মমুত্তে

বিবীয়তাং তত্র বিধেয়মুত্তরম্ ।

পরপ্রণীতানি বচাসি চিব্বতাং

প্রযুক্তিনারাঃ গল্প মাধুশাং গিরঃ ॥

(2) মতিভেদতমন্তিরোহিতে

গহনে কৃত্যবিধে বিবেকিনাম্ ।

স্কৃতঃ পরিশুদ্ধ আগমঃ

কুরুতে দাপ ইবার্থার্থনম্ ॥

(3) সমবৃত্তিরূপৈস্তি মাদবঃ

সময়ে ষষ্ঠ তনোতি তিগ্ৰতীম্

অধিষ্ঠিত লোকমোক্ষস।

স বিবধানিষ মেদিনীপতিঃ ॥

(b) Give the form of the word underlined in (1) in the third case ending dual number; give the derivation of the word underlined in (2); Change the voice of extract (3).

8. Translate the following passages into Sanskrit :—

(a) Accept the Kingdom thine by right,
And so thy faithful friends delight.
Let the broad land no longer be,
All widowed and forlorn of thee;
Let the full moon of Autumn reign,
Triumphant over the night again.
These lords and I before thee bend:
O Rama, in our prayer attend,
O do not thou this grace deny;
Thy brother, pupil, slave, am I.

(b) The boy grew henceforward, as the moon waxes in the bright fortnight. He was the source of pleasure to his parents and the desire of the people. He acquired the Vedas first from the religious teachers, O Muni! then skill in all kinds of weapons, then complete knowledge of archery.

SANSKRIT—PASS

Second Paper

1. Give a brief summary of the first Act of the Uttara Rama-Charita or the Sakuntala in your own words in English.

2. Explain any one of the following extracts in Sanskrit after the manner of Mallinatha, with reference to the context in each case :—

- (a) অদ্বৈতং স্পৃহন্তঃখয়োরনুগুণং সর্বাশ্ববন্তাম্ যত্
 বিশ্রামো হৃদয়স্ত যত্র যশ্মিন্নাহার্যো রসঃ ॥
 কালেনাবরণাতায়াং পরিণতে যৎ স্নেহসারে স্থিতম
 ভদ্রং প্রেম স্মামুশস্ত কণমপোকং হি তৎ প্রাপাতে ॥
- (b) প্রিয়প্রায়া বৃত্তিবিনয়মধুরো বাচি নিয়মঃ
 প্রকৃত্যা কলাগী মতিরনবগীতঃ পরিচয়ঃ ॥
 পুরো বা পশ্চাৎ তদিদমবিপর্যাসিতরসম্
 রহস্তং সাধুনা মনুপাধি বিস্তৃঙ্ক বিজয়তে ॥
- (c) দলতি হৃদয়ং গাঢ়োদ্বেষঃ দ্বিধা নতু ভিত্ততে
 বহতিবিকলঃ কারো মোহং ন মুকুতি চেতনাম্ ।
 হৃদয়তি তনুমন্তদাহঃ করোতি ন ভঙ্গসাং
 প্রহরতি বিধির্মগ্নচ্ছদী ন কুন্ততি জীবিতম্ ॥
- (d) অনিয়তরদিদিশ্নিতং বিরাজতে
 কতিপর্যকোমলদন্তকুটমলাগ্রম্ ॥
 বদনকমলকং শিশোঃ স্মরামি
 স্বলদসমগ্নসমঞ্জ জগ্নিতং তে ॥
- (e) বদুচ্ছাং সংবাদঃ কিমু কিমু গুণানামতিশয়ঃ
 পুরাণো বা জন্মান্তরনিবিড়বন্ধঃ পরিচয়ঃ ।
 নিজো বা সম্বন্ধঃ কিমু বিধিবশাং কোহপ্যবিদিতো
 মমৈতশ্চিন্ দৃষ্টে হৃদয়মবধানং রচয়তি ॥
- (f) চিরং ধ্যাওয়া-ধ্যাওয়া নিহিত ইব-নির্মায়পূরতঃ ।
 প্রবাসেপ্যাধাসং ন খলু ন করোতি প্রিয়জনঃ

জগজ্জীর্ণাৰণ্যং ভবতি হি বিকল্পৰূপৰমে
কুকুলানাং রাশৌ তদনু হৃদয়ং পচ্যত ইব ।

(1) In extract (a), derive অৰ্ঘ্যৈতন্ and বিশ্রামঃ ।

(2) In extract (b), name and expound the samasa in প্রিয়প্রায়ঃ ।

Account for the আত্মনেপদীয় form in বিজয়তে ।

(3) In extract (c) parse হৃদয়ন্ । In what voice is ভিজতে ? Define the voice and illustrate your answer with other examples.

(4) Expound the samasas in (d).

(5) In extract (f), what is the force of the two negatives in the 2nd charana ?

3. Translate any two of the following extracts into English giving the context in each case.

(a) সরসিজমনুবিদ্ধং শৈবালেনাপি রম্যং
মলিনমপি হিমাংশোল্পন্ন লব্ধীং তনোতি ।
ইয়মধিকমনোজ্ঞা বক্ষলেনাপি তরী
কিমিব হি মধুরাণাং মণ্ডনং নাকৃতীনাং ॥

(b) শমপ্রধানেবু তপোধনেবু
গুঢ়ং হি দাহায়কমন্তি তেজঃ ।
স্পর্শানুকূলা ইব সূর্য্যাকান্তা
স্তদন্ততেজোহভিভবামন্তি ॥

(c) যান্ত্রাত্যগ শকুন্তলেতি হৃদয়ং সংস্পৃষ্টমুৎকর্ষণা
কর্ষণঃ স্তম্ভিত বাস্পবৃত্তিকল্লুশ্চিন্তাজড়ং দর্শনম্ ।
বৈক্লব্যং মম-তাবদীদৃশমহো স্নেহাদরণ্যোকসঃ
পীডান্তে গৃহিণঃ কথং নু তনয়াবিলেবদুঃখেনবৈঃ ॥

(d) ভ্রমর্হতাং প্রাগ্রহরঃ স্মৃতোহসি নঃ
শকুন্তলা মুর্ত্তিমতীৰ সংক্ৰিয়া ।
সমানয়ঃস্তুল্যপ্তং বধুবরম্
চিরন্ত বাচ্যং ন গতঃ প্রজাপতিঃ

(e) ইতঃ প্রত্যাদেশাত্ স্বজনমনুগত্বং ব্যবসিতা।
মূহুতিষ্ঠেতু্যচৈর্বদিতি গুরুশিষ্যে গুরুসমে ।

পুনর্দৃষ্টিং বাঙ্গা প্রসরকলুসামর্পিতবতী

ময়ি ক্রুরে যন্তং সবিবমিব শল্যাং দহতি মাম্ ।

(1) In extract (a), derive অনুবিদ্ধম্ । Give the 3rd person singular of the root in लिट् and लृट् । Derive सरसिजম্ and account for the non-elision of the case-ending in it.

(2) In extract (b), change the voice of অস্তি ।

(3) In extract (c), account for the 5th case ending in স্নেহাৎ ।

(4) In extract (d), state what case endings the accusative স্ব can take. Account for the singular number in বধুব্রম্ ।

4. Render the following into Sanskrit :—

ইমং অবস্থান্তরং গতে তাবিসে অনুহাএ কিংবা হুমরাতিএণ । অভা দানিং মোঅণীওত্তি ববসিঅং এদং । অজ্ঞগুহ, সংসই পরিণএ ন এসো সমদায়ে । পোরব জুন্তং ণাম দে তহপুর্না অসনমপদে সহাবুভাণহিঅম্ ইমং জনং সমঅ—পূর্বংপআত্রি এরিসেহিং অকথরেহিং পচাখাদুম্ ।

5. Translate into Sanskrit either of the following :—

A.

I dwell constantly on the Ganges, bathing and eating no flesh, and practising the vow of the moon penance like an ascetic ; in my presence, the birds so constantly praised your highness as given to the study of the law and worthy of confidence, that I came hither to hear law from you ; but you so understand your duty that you are ready to kill me, a guest.

B.

Fragrant blossoms strewed the pathway ; song of welcome filled the air ; joyous men and merry women issued forth in fair garments ; they lifted up their faces, they waved their hands on high, and they raised the voice of welcome as their beloved King drew nigh.

6. Render into idiomatic Sanskrit any three of the following :—

(1) The queen has been made acquainted with your immodesty.

(2) What is the use of life stained by infamy ?

(3) What have we to do with watching the movements of our master ?

(4) He did not deviate even a line from the beaten track.

(5) He interferes in matters not his own and thus gets into trouble.

SANSKRIT—PASS

Third Paper

1. Translate any two of the following extracts into English :—

(a) विरतवचनायां तस्यां भूमिपालस्तुषीं मूर्ध्नि विह्वला दीर्घमुखः निभसा निजगाद देवि, किमत्र क्रियतां दैधायस्ते वस्तुनि । अलमतिरुदितेन । नहि शक्यं दैवमन्त्रथां कर्तुम् । यावत्तु मातुषेण शक्यमुपपादयितुं, तावत् सर्वमुपपाद्यताम् । अधिकां कुरु देवि शूर्य उक्तिम् । शिञ्जणम् उपपादय देवताम् पुत्राम् ।

श्वविजनपरिचर्यायु दर्शितादरा भव । अमोघफलाहि महामुनिजनसेवा मामपि दहतोवायमहर्निशम् अनल इव अनपतातासमुद्भवः शोकः । शृणुमि मे प्रतिभाति जगत् । अफलमिवाखिलं पश्यामि जीवितं राज्ञाक्ष । अप्रतिविधये तु विधातरि किं करोमि । तन्मुखातां देवि शोकामुवक्षः । आधीयतां धैर्ये धर्मे च वीः । धर्मपरायणानां हि सदा समीपसंस्कारिणा कल्याणसम्पदा भवन्ति ।

(b) सोऽहं देव ! सोऽहं भवदध्वेषणपरः कदाचित् दामलिपुत्राया नगरम् बहिरुच्छान्ते महति उंसवे वर्तमाने कमपि विजने वीणया आश्रान्ते विनोदयन्तः कोशदासनामानं युवानमपश्यम् । अपृच्छ क्व ! को नाम अयमुत् सर्वः किमर्थं वा समारकः, कथं वा भवान् उत स्वमनादृता एकास्ते विषय इव तिष्ठति इति सोऽहं विधातः, सोम ! शृङ्गपतिः तुङ्गध्वाना-मानपतः अयमिन् आरतने शिवां बिक्रवासिनीमारधयन् अपताययः प्रार्थयामास, अनया किल श्वेने समादिष्टः उत पतन्ते तव एकः पुत्रः कञ्चा च एका स तु तपा पाणिग्राहकममृज्जीविशति, सा तु सप्तमाद् वर्षादारभा आपरिणयं प्रतिमासं कृत्तिकां कन्दुकनुतानं गुणवत्तुर्लाभाय मामाराधयतु, यकाभिलषेत सा अमृगै देया स च उंसवः कन्दुकोऽसवनामाश्रितः ।

2. (a) Form Sandhi in three of the following pairs of words :—

श्रैरे—आग्रहः ; कवी—ईर्ष्या ; महं—शकटम् ; महान्—शब्दः ; and आयु—कामः ।

(b) Decline four of the following words :—

मति in the dative case ; जरा in the genitive case ; त्रिधा in the genitive, अदस् (feminine) in the genitive case ; अक्षि in the locative case : and वृत्रहन् in the locative case.

(c) Give the feminine forms of three of the following :—

अथर्वन्, स्मृशत, कुलदन्त, पूराण, and अतिमहिम्न ।

3. (a) Derive three of the following words :—

सापङ्गः, कानীনः, कियत्, श्रेष्ठ, and भुयान् ।

(b) Give the rules for the correct use of the पञ्चमी विभक्ति with an example to illustrate each of the rules.

(c) Substitute single words for three of the following :—

हस्तमिच्छति ; जौविडुमिच्छति, पुनः पुनः क्रामाति, पुनः पुनः नृताति ; धूमम् उद्भवति ; and तरुनिव आचरति ।

(d) Frame sentences to illustrate the use of two of the following :—

शतराम्, अलम् and थलम् ।

4. (a) Conjugate in the third person singular, four of the following :—

ग्रह् in लट्, नश् in लिट्, ह् in लृट्, रुव् in लोट्, वा in विधिलिङ् and सिध् in लृट् ।

(b) Change the voice in one of the following sentences :—

शिशुम् गृहम् अनैश्रत । बालिक। वृक्षं पुष्पाणि अचिनोत् ।

(c) Either form Compound words (samasas) out of the following :—

विंशतेरासन्ना, आयाश्वि गावो यन्निन् काले गोष्ठम्, सर्वा रात्रिः, and निश्चितः श्रेयः ।

Or,

Explain the Samasas in the following :—

अभाशि, अन्नबुद्धिः, and मृगजाल ।

5. Correct or justify the following sentences :—

(a) नैतत् सूकरं तव आश्रयनं गच्छतः ।

(b) ग्रामे अधिवसन् स शत्रुं द्रुहति ।

(c) गिरिनदी प्रवहते, विसहते च बाधाम् ।

(d) भवन्तः प्राते उत्तिष्ठन्तम् सूर्याः प्रथमतः ।

(e) इयं ममेवा कञ्चका धार्मिकेति प्रशस्तते ।

6. Indicate the services rendered to the cause of Sanskrit literature either by Sir William Jones or by Henry Thomas Colebrooke.

7. Either enumerate the principal Puranas, or comment on the following observation. 'The careful investigations of Professor Jacobi have shown that the Ramayana originally consisted of five books only.'

8. Trace the developments of either the Sanskrit drama. or the Hindu astronomy.

9. Write short notes on the following authors and works :—(a) either Asvaghosa or Subandhu. (b) either Kumarila or Sankara, (c) either Somadeva or Ksemendra, (d) either the Mahabhasya or the Rajatarangini, and (e) either the Panchatantra or the Nalo-pakhyana.

1916

SANSKRIT—PASS

First Paper

1. Explain Manu's theory of the origin of the castes and enumerate the duties he has assigned to each.

2. Explain in Sanskrit *any* two of the following passages :

(a) ভমোহয়ং তু সমাশ্রিত্য চিরং তিষ্ঠতি সেন্নিয়ঃ ।

ন চ স্বং কুরুতে কর্ণং ভদোংক্রামতি মুর্ছিতঃ ॥

(b) অধ্যোক্তমাণ স্বাচাত্তো যথাশাস্ত্রমুদয়ুগঃ ।

ব্রহ্মাঙ্গুলিকৃতোহধ্যাপো লঘুবাসা জিতেন্নিয়ঃ ।

(c) আ হৈ ব স নথাগ্ৰেভ্যঃ পরমং তপাতে তপঃ ।

য শ্রগব্যপি দ্বিজোহধীতে স্বাধ্যায়ং শক্তিতোহবহম্ ॥

3. Give the substance of *any* two of the following passages :—

(a) কর্ণপাং চ বিবেকার্থং ধর্ম্মাধর্ম্মৌব্যবচরং ।

ঋশ্মৈরবোজয়চেমাঃ স্বহৃদুখাদিত্তিঃ প্রজাঃ ।

(b) ইন্দ্রিয়াণাং বিচরতাং বিষয়েষপহারিণু ।

সংযমে যত্নমাত্তিষ্টেদ্বিহ্বান্ যন্তেব বাজিনাম্ ॥

(c) নাভিব্যাহারেদুষ্ক স্বধানিনয়নাদূতে ।

শূদ্রেণ হি সমস্তবিদ্যাবচ্ছেদে ন জায়তে ॥

4. ननु ब्रह्मकृतं देहं शत्रुं कथं मानवव्यापदेशः ।

How has this question been answered by the commentators ?

5. (a) Explain *any two* of the following passages in Sanskrit :—

(1) असक्तमाराधयतो यथायथं ।

विभज्या भक्त्या समपक्वपातया ॥

गुणान्मुरागादिव सन्ध्यामीयिवान्

न बाधतेहं त्रिंशत् पञ्चमम् ॥

(2) न तेन सज्यां कचिद्बुद्धतः धन्यः

कृतं न वा कोपविज्जिह्वमानम् ।

गुणान्मुरागेण शिरौऽभिरुहते

नराधिपैर्मालामिवास्तु शासनम् ॥

(3) इयमिष्टगुणाय रौचतां

कचिरार्था भवतेहपि भारती ।

ननु वक्तृविशेषनिष्पृहा

गुणगृहा वचने विपश्चितः ॥

(b) Conjugate the roots of the words underlined in (1) in लङ् and लृङ् third person singular ; change the voice of (2) and parse the words underlined in (3).

6. (a) Translate *three* of the following passages into English :—

(1) भवस्तुमेतर्हि मनसिगर्हिते

विवर्तमानं नरदेववस्त्रं नि ॥

कथं न मम्याश्च लयतूदीरितः

शमीतरुं शुक्रमिवारिक्छिन्दः ॥

(2) विषग्निसिन्धो यदिदं दशां ततः

समूलमप्यु लयतीव मे मनः ।

पटैररपथ्यासित वीर्यसम्पदां

पराभवाहपुत्रस्यैव मानिनाम् ॥

(3) अपवर्जित विप्लवे गुच्छे

हृदयं ग्राहिणि मङ्गलास्पदे ।

বিমলা তব বিস্তরে গিরাং

মতিরাদর্শ ইবাভিদুস্ততে ॥

(4) মতিমান্ বিনয়প্রমাথিনঃ

সমুপেক্ষত সমুন্নতিং দ্বিষঃ ।

মুজয়ঃ পলু তাদৃগন্তরে

বিপদস্তা হুবিনীতসম্পদঃ

(b) Expound the *samasa* in extract (2) ; give the derivation of the words underlined in extract (3) and conjugate the roots of words underlined in extract (4) in third person singular.

7. Translate the following passages into Sanskrit :—

(a) They went through wood and dale, over mountain and meadow, until they came to the margin of a wide sea. Over this great water they passed and then made their way to the border of an extensive forest. Through this they wandered all day in an aimless fashion.

(b) Cowards die many times before their deaths ;
The valiant never taste of death but once.
Of all the wonders that I yet have heard,
It seems to me most strange that men should fear :
Seeing that death, a necessary end,
Will come, when it will come.

SANSKRIT—PASS

Second Paper

1. Give, in English, a short sketch of Act III of the *Uttararama-charita*.

2. (a) Translate into English *either* of the following groups :—

Group A

(1) ইদং বিষ্ণুং পালাং বিধিবদভিমুক্তেন মনসা

প্রিয়াশোকো জীবং কুসুমমিব ঘর্ষণঃ ক্রময়তি ।

স্বয়ং কৃদ্ধা ত্যাগং বিলপনবিনোদোহপ্যস্থলভ-

স্তত্বদাপ্যুচ্ছ্বাসোভবতি নমু লাভো হি রুদিতম্ ॥

(2) নিয়ময়সি বিমার্গপ্রস্থিতানাত্তদণ্ডঃ

প্রণয়ময়সি বিবাদং কল্পসে রক্ষণায় ।

অতমুখ্ বিজবেষু জাতয়ঃ সন্ত নাম
ত্বয়ি তু পরিসমাপ্তঃ বন্ধুকৃত্বং প্রজানাম্ ॥

Group B

- (1) অপত্যে যন্তাদৃগ্ ছরিতমভবন্তেন মহতাং ।
বিষক্তন্তীত্রেণ ত্রণিতদ্বদয়েন ব্যাঘ্রতাং ।
পটধীরাবাহী নব ইব চিরেণাপি হি ন মে
নিকৃন্তন্ মর্মানি ক্রকচ ইব মন্থাবিরমতি ।
- (2) কিং তাবদ্ধু তিনামুপোততপসাং বিব্রন্তপো দূষিতঃ
ধর্ম্মারণ্যচরেষু কেনচিত্তত প্রাণিষসচেষ্ঠিতম্
আহো স্বিং প্রসবো মমাপচরিতৈর্বিষ্টস্তিতো বীরধাম্
ইত্যাক্রূতবহ প্রতর্কমপরিচ্ছেদাকুলং মে মনঃ ॥

(b) In what sence is বতি used in বিধিনং ? Account for the use of ত্বাচ্ in কৃতা in verse (1) A. Derive আত্ম in আত্মদণ্ডে । Why is নিয়ময়সি used instead of নিয়াময়সি ? Account for the use of লোট্ in সন্ত । Parse রক্ষণায় in verse (2) A. and চিরেণ in verse (1) B.

(c) Derive বিষক্ত in verse (1) B and বিষ্টস্তিত in verse (2) B. and give the লট্ and লঙ্ forms of the roots, in the third person singular. Explain the formation of বীরধ্ and give the meaning of আহো

3. Give, in your own Vernacular, the substance of Kanva's advice to Dushyanta (through Swarnagurava), and also to Sakuntala, at the time of her departure for Hastinapura.

4. Render into English, indicating the context ;—

- (a) যেন যেন বিযজ্যন্তে প্রজাঃ স্নিগ্ধেন বন্ধুনা ।
স স পাপাদৃতে তাসাং দৃশ্যন্ত ইতি ঘৃণতাম্ ॥
- (b) অনিভিন্নগভীরত্বাদগ্ ত্বনব্যাখঃ
পুট পাক প্রতীকাক্ষো রামস্ত করুণো রসঃ ॥

5. Translate into English :—

আশ্রম্বেণ কেঅলং দমবিঅনন্তগোল্লঙ্গলদামসীমল্লঙ্গলেণ দেহবন্ধেণ কবলিদারবিম্বকেসরকসা-

অকটকলহঃসশিণাদদোহরদোহরেণ সারণ অ রায় ভদ্রসুস অণুহরদি । জীব জাদ পেক্খামি দাব
দে মুচ্চন্দা ॥

(1) কৃশাখতনয়া হেতে কৃশাখাং কৌশিকং গতাঃ

অথ তৎসম্প্রদায়েন রামভদ্রে ব্যবহৃতঃ ॥

(2) ঙ্খাঈবত্ৰমিমাৰ্জুজ্যোতিরম্ভলঃ ।

পুটভেনো ললাটস্থনীললোহিতচক্ষুঃ ॥

(a) Explain, in English, the allusions in the above.

(b) What is the meaning of the word সম্প্রদায় in *sloka* (1)? Derive ঙ্খাঈ and expound the *samāsas* in the compound words in *sloka* (2).

6. (a) Refer to the context, and explain in your own Sanskrit, only one of the following groups :—

Group A

(i) কিঙ্করুষ্ঠাননিভাষাং স্বাতন্ত্র্যমপকর্ষতি ।

সকট। ছাহিত্যগ্নীনাংপ্রত্যবায়ৈর্গৃহস্থতা ॥

(ii) যাতোকতোহন্তশিখরং পতিরোষধীনা-

মাবিকৃতোহরণপুরঃসর একতোহর্কঃ ।

তেজোম্বরস্ত যুগপদ্যসনোদয়াভ্যাং

লোকো নিয়ম্যত ইবৈব দশান্তরেব ॥

Group B

(i) জলতি চলিতেকানোহগ্নির্বিপ্রকৃতঃ পন্নগঃ ফণং কুরুতে ।

প্রায়ঃ স্বমহিমানং কোভাং প্রতিপত্ততে হি জনঃ ।

(ii) ব্যতিবজ্জতি পদার্থানন্তরঃ কোহপি হেতু-

র্ন খলু বহিরূপাধীন প্রীত্যঃ সংপ্রয়ন্তে ।

বিকসতি হি পতঙ্গস্যোদয়ে পুণ্ডরীকং

ঔষতি চ হিম রশ্মিবৃদ্ধগতে চন্দ্রাকাঃ ।

(b) There are two readings অনুরূপাননিভাষাং and অনুরূপাননিভাষাং in (i) A. Which of those readings do you prefer, and why? What is the meaning

of the word आहिताग्नि ? Has the word any other form ? Give reasons for your answer.

(c) Change the voice of the second half of verse (2) A. In what sense is the word बसन् used here ? Give its different meanings. Expound and name the *samāsas* in दशान्तरेषु ।

(d) Derive पन्नग and महिमा and parse आरः in verse (1) B.

(e) Derive व्यातिव्यक्ति and उदय and give the third person singular forms of the roots in लिट् in लृङ् and say why व्यातिव्यक्ति is not in आञ्चनेपद (with व्यति)

7. Translate *any five* of the following extracts in Sanskrit :—

(a) There followed, in eager pursuit of the wounded elephant a man on horseback, armed with a bow, whose very appearance proclaimed him to be a noble-minded hero.

(b) Then the hermit Narada, surrounded with a circle of light, descended there from heaven like a Sun. The King of Vatsa offered him the *arghya*, and the hermit said to him, 'I have been sent here by Siva to cheer you up'.

(c) One day he went out to behold the beauty of the city and after he had seen all kinds of places, he entered the garden attached to it. Here he saw a heavenly form coming down from the sky.

(d) There king Prasenajit, who had returned from a distant hunting expedition, saw that prince of noble form and feature. The king approached him and asked him his name and lineage, and being delighted conducted him to his palace.

(e) When the wicked king had been thus addressed by Siva, he fell on the earth vomiting blood. Then the god disappeared, and the wicked king immediately recovered and went to his palace and commenced practising cruelties.

(f) Here the demon Dundubhi was slain in a cave by Bali ; this was the original cause of enmity between Bali and Sugriva. For Sugriva, wrongly supposing that the demon had slain Bali, blocked up the entrance of the cave and went away terrified.

SANSKRIT—PASS

Third Paper

1. Translate *any two, but not more than two*, of the following extracts into English :—

(a) অস্তি মগধদেশালঙ্কারভূতা, মেখলমেব ভূবঃ, মুনিজনসেবিতা পবিত্রা বিষ্ণ্যাটবী নাম ! অসাধু সকলভুবনখ্যাতঃ মহামুনে অগন্তসা আশ্রমপদমাসীং । তন্ত্ৰ অগন্তাশ্রমন্ত্ৰ নাতিদূরে অপাং নিধানং পম্পাভিধানং পদ্মাসরঃ । তন্ত্ৰেব পদ্মাসরসঃ পশ্চিমে তীরে মহান্ জীর্ণঃ শাশ্বলী বৃক্ষঃ । তত্র বিরচিতকুলায় সহস্রানি শুককুলানি প্রতিবসন্তিহ । একস্মিন্শ্চ জীর্ণকোটরে জায়য়া সহ নিবসতঃ পশ্চিমে বয়সি বৰ্ত্তমানস্ত পিতুঃ অহমেকৈকঃ শূন্যভবমতিপ্রবলয়া চাভিভূতা মমৈব জায়মানস্ত্ৰ প্রসববেদনায় জননী মে লোকান্তরমগমৎ । তাতস্ত্ৰ স্নেহাৎ অন্তর্নিগৃহ্য শোক একাকী মংসংবর্দ্ধনপর এবাভবৎ ।

(b) অস্তি দক্ষিণেন হিমবন্তঃ বিষ্ণাবতী নাম নগরী । অত্র হুবিচারো নাম ভূপালো বহুব । তন্ত্ৰ জয়ৎসেনো নাম পুত্রোহভূৎ । স চ কদাচিদাখেটায় মহদরণ্যং প্রবিষ্ট হরিণমেকং দদর্শ । অথ স যুগয়া কুতূহলী তমবধাবৎ পরং তরসী হরিণঃ স্তদূরমেনং বিকৃত্য কৃত্রাপি গুপ্তে নিলীনঃ । হরিণমপশ্বন্ রাজকুমারঃ শ্রান্তপরাবৃত্য পশ্চান নগরমার্গমজানন্ দিগ্ভ্রুটো বভূব । অথ কথংচিন্মার্গ-মুখপ্ৰেক্ষ্য মল্লং মল্লমেকাকী সমাগচ্ছন্ মার্গ মধ্যে কাং নদীমপশ্বৎ । তন্ত্ৰাশ্চ তীরে কোহপি বিপ্রঃ সায়তনং কর্ণ কলাপমতিষ্ঠরাসীং । তৎ সমীপং গচ্ছা রাজপুত্রঃ প্রাহ—ভো ব্রাহ্মণ যাবদহং জলং পিবামি তাবৎতমমুখং গৃহাণ ইতি । ব্রাহ্মণঃ কিং তব প্রেচ্ছোহহমখং গ্রহীতুমিত্যপৃচ্ছৎ ।

(c) সোহপি পরমানন্দেন পল্লবিতচেতা বিকশিত বদনারবিন্দো—মম স্বামী সোমবংশা-বতংশে! বিশুক্যশোনিধিঃ রাজবাহন এষ মহাভাগ্যতয়া অকাণ্ড এবান্ত পাদমূলমার্গতবানস্মি । সম্প্রতি মহান্ মদনোৎসবঃ জাতঃ ইতি সসম্ভ্রমম্ মল্লোলিকায়্য অবতীৰ্ণ্য সভয়পদবিজ্ঞাসবিলাস-হর্ষণংকৰ্ণচরিত্তিত্তিচতুরদাহ্যদ্যুগতস্ত চরণকমলযুগলং গলদ্বল্লসম্মলিকাগাঢ়মালিন্য অয়ে সৌম্য সৌমদন্ত ইতি ব্যাজহার । ততঃ কস্তাপি পুন্নাগভূরহস্ত ছায়শীতলে তলে সংবিষ্টেন ময়ুজনাত্থেন । সপ্রণয়মতাগি সখে কালমেতাবস্তং দেশে কস্মিন্ প্রকারেণ কেনাস্বায়ি ভবত? সম্প্রতি কুত্র গম্যত? তরুণী কেয়ম্? এষ পরিজনঃ সম্পাদিতঃ কথম? কথম ।

2. (a) Expound the *Sandhi* in the following :—

অবিজ্ঞানঃ, পিতারক্ষ, গতা ইমৌ ।

(b) Decline *four* of the following :—

সখি in the dative case ; জয়া in the objective case ; অন্ধি in the locative case ; পূৰ্ণ in the ablative case ; অদস্ in the genitive case ; and অশ্বদ্ব in the dative case.

(c) Conjugate *four* of the following :—

अन् or क्षी in लट् ; अ or क् in लङ् ; आग् or वक् in लोट् ; and क् or आस् in लृट् ;

3. Either, convert ह्रल, दूर, and बहल into नामधातु and their forms in लट् ;

Or, Derive गृहाण, विष्, क्रिया ।

4. (a) Give the desiderative (सनञ्) forms in three of the following :—

बद्, दह, ग्रह, वस् and अद् ।

(b) Give the feminine forms of *two* of the following :—

पालक, चलन and कृपण ।

(c) Expound the *samasa* in *four* of the following :—

‘समक, तीर्थकाक, अपररात्रि, पक्षपात्र, दूर्याच्छ्रमसौ and कदाचारः ।

5. Account for the *vibhaktis* in *three* of the words underlined in the following :—

(a) मासम् अधीतं व्याकरणम् ।

(b) स द्वा तृणाय मञ्जते ।

(c) नैतद् द्वयं तेन ।

(d) सतां पूजितो रामः ।

6. Correct or justify *three* of the following :—

(a) नगरगामिनी सेना रञ्जावणम् अपञ्च ।

(b) मा गृहीहि परज्वा, तथा सर्वं अण्डं भविष्यति ।

(c) सन्तिष्ठति चेत् सोऽत्र मरिष्यते ।

(d) विषदतस्तु नैतत् स गच्छति !

7. Give a short account of the principal European scholars that devoted themselves to the study of Sanskrit in the eighteenth and nineteenth centuries.

8. *Either*, Discuss the date of composition of the Mahabharata.

Or, State what you know about the time and place of origin of the Ramayana.

9. (a) Write notes on *four* of the following :—

Mahabhasya, Buddha charita, Setubandha, Chaurapanchasika, Rajatarangini, Surya siddhanta, and Mitaksara.

(b) Write notes on *three* of the following :—

Vatsabhatti, Dignaga, Aryabhata, Subandhu, and Hala.

10. *Either*, Describe the origin and character of the Indian drama.

Or, Give a short account of the Vedanta philosophy.

1917

SANSKRIT—PASS

First Paper

1. Give an outline of the conduct of the student towards his teacher as enjoined by Manu.

Or,

State the different functions that Manu has assigned to different castes.

2. Explain the idea contained in *any three* of the following passages :—

(a) তত্ত্ব সোহর্নিশস্তান্তে প্রহৃষ্টঃ প্রতিবুধ্যতে ।

প্রতিবুদ্ধস্ত সৃজতি মনঃ সদসদাস্ককম্ ॥

(b) তেবু সম্যক্ৰ্ত্তমানো গচ্ছত্যমরলোকতাম্ ।

যথা সঙ্কলিতাংশেহ সৰ্ব্বান কামান্ সমম্ৰ্ত্তে ॥

(c) স্বাধ্যায়েন ব্রতৈর্হোমৈস্ত্রৈবিত্তেনৈজ্যয়া হুতৈঃ ।

মহায়জ্ঞেন বজ্রেন ব্রাহ্মীরং ক্রিয়তে তপুঃ ॥

(d) একাক্ষরং পরং ব্রহ্ম প্রাণায়ামঃ পরং তপঃ ।

সাবিত্রাস্ত পরং নাস্তি মৌনাত্ সত্যং বিশিষ্যতে ॥

3. Translate any *two* of the following passages into English :—

(a) যুগপত্ত্বে প্রলীয়ন্তে যদা তস্মিদ্ধানি ।

তদায়ং সৰ্ব্বভূতান্য হুংসং অপতিতি নিবৃত্তঃ ॥

- (b) न तथैतानि शक्यंते संग्रहयितुमस्य ।
 विषयेषु प्रकृतानि यथाज्ञानेन नित्याः ॥
- (c) धर्मार्थवृत्ताते श्रेयः कामार्थे धर्म एव च ।
 अर्थ एवेह वा श्रेयस्त्रिवर्ग इति तु हिति ॥

4. (a) Explain two of the following passages in Sanskrit :—

- (i) स किंस्था साधु न शक्ति योऽधिपः
 हितान्न यः संगृह्णते स किञ्चिद्भूः ।
 सदाशुक्लेश्वरि कूर्वते रतिः
 नृपेक्षमात्रेण च सर्व सम्पदः ॥
- (ii) विधाय रक्षान् परितः परेतनान्
 अशक्तिकारमुपैति शक्तिः ।
 क्रियापवर्गेष्वनुजीविसांकृतः
 कुतस्तत्तामस्तु वदन्ति सम्पदः
- (iii) विजित्य यः प्रोज्ञामवद्वहन्तुवान्
 कुलान्कूप्यं बहू वासवोपमः ।
 स वक्त्रासांसि तवाधुनाहरन्
 करोति मनुजं न कथं धनप्रियः ॥

(b) Expound the *Samasas* and account for the *atmanepada* form of the verbs in extract (i)

(c) Change the voice of extract (iii)

5. (a) Translate any two of the following passages into English :—

- (i) तदलं अतिपक्वमूत्रतेः
 अवलम्ब्य व्यवसायं वक्ष्याताम् ।
 निवसन्ति परांपमानश्रया
 न विवादेन समं समुक्ताः ॥
- (ii) मदसिद्धमुद्देशं गाधिपः
 करिष्विष्वक्तेन हतः !

লবনং খলু তেজসা জগত্
 কাম্যদিস্থিতি কৃতমন্ততঃ ॥

(iii) অমুরপ্যাহন্তি বিগ্রহঃ

প্রভুমন্তঃ প্রকৃতি প্রকোপজঃ ।

অখিলং হি হিনন্তি ভূধরং

তরুশাখান্তনিবৰ্ধজোনলঃ ॥

(b) Conjugate the root of the word underlined in (i) in লিট্ third person singular.

(c) Comment grammatically on the word underlined in (ii), and conjugate the root of it in লুঙ্ and লুট্ third person singular.

6. Translate the following passages into Sanskrit.

(a) A king, who desire prosperity, must listen to his servants who use him well, and they must give their lord at the right time useful counsel even without being asked. So, King, if you feel confidence in me, if you are not angry, and if you do not wish to conceal your feelings from me, and if you are not disturbed in mind by my boldness, I would ask you certain questions.

(b) Soon the sky cleared and became spangled with myriads of stars, presenting the aspect of magnificent lake smiling with blooming lilies. Beholding the sky cleared of clouds, he cast his eyes on all sides, and seeing that night was already upon him, he began to think—My home is at a great distance from where I am—He then resolved to pass the night under the shade of that tree.

SANSKRIT—PASS

Second Paper

1. Give, in English, the substance of Durvasa's curse upon Sakuntala.

Or,

Vasishta's message to Sita, through Ashtavakra, as given in Act 1 of the Uttaracharita.

2. (a) Translate into English either of the following groups :—

Group A

- (i) পাতুং ন প্রথমং ব্যবস্থতি জলং মুদ্রাবলীতেষু বা
নাদন্তে প্রিয়মণ্ডনাংপি ভবতাং মেহেন বা পল্লবম্ ।
আন্তে বঃ কুহুমপ্রসুতিসময়ে বস্ত্রা ভবভ্যুৎসবঃ
সেয়ং যাতি শকুন্তলা পতিগৃহং সৰ্ব্বৈরমুজ্জায়তাম্ ॥
- (ii) উপারানঃ ভাবাদবিরত বিনোদব্যতিকরো
বিমর্দেধীরাণাং জগতি জনিতাতাত্ত্বতরসং ।
বিরোগো মুচ্ছাক্ষীঃ স খলু রিপুঘাতাবধিরভূৎ
কথং তুফীং সহো নিরবধিরয়ং তুপ্রতিবিধঃ ॥

Group B

- (i) নৈতচ্চিত্রং যদয়মুদধিশ্চামসীমাং ধরিত্রা-
মেকঃ কুংস্রাং নগর পরিখ প্রাঃশুভাহভূ নক্তি ।
আশংসন্তে সমিতিষু সুরাঃ বন্ধবৈরা হি দৈতৈ-
র্যন্তাধিজ্যে ধনুযি বিজয়ং পৌরুহুতে চ বজ্রে ॥
- (ii) প্রিয়প্রায়া বৃত্তিবিনয়মস্থণো বাচি নিয়মঃ
প্রকৃত্যা কল্যাণী মতিরগ্ণবুগীতঃ পরিচয়ঃ ।
পূরা বা পশ্চাৎ তদিদমবিপৰ্যাসিতরসং
রহস্তং সাধুনামমুপধি বিশুদ্ধং বিজয়তে ॥

(b) Comment grammatically on the word অগীত. Would it be incorrect to say মণ্ডনপ্রিয়া instead of প্রিয়মণ্ডনা in (i) A ? Give reasons for your answer.

(c) Derive any two of the following .—ব্যবস্থতি, in (i) A, সমিতি in (i) B and বিপৰ্যাসিত in (ii) B. Parse either ধীরাণাং in (ii) A. or বৃত্তি in (ii) B. Explain the formation of either মুচ্ছাক্ষী in (ii) A, or উদধি in (i) B.

(d) Change the voice of অমুজ্জায়তাম্ (i) A, showing the corresponding change in the sloka.

(e) Account for পরমৈশ্বর্য in ভূনক্তি, or আত্মনৈশ্বর্য in আশংসন্তে and give the derivative meaning of the base of পৌরহৃত in (i) B.

(f) In what sense is the word রহস্ত used here and what is its ordinary meaning ?

3. (i) বসন্তেরিষ শশিষ্ঠা ভর্তৃর্বহমতা ভব ।
হৃতং ভূমপি সত্রাজং সেব পুরমবান্ধু হি ॥
- (ii) ত্রিশ্রোতসং বহতি যো গগনপ্রতিষ্ঠাং
জ্যোতীংষি বতরতি চ প্রবিভক্তরশ্মিঃ ।
তস্ত্র ব্যপেতরজসঃ প্রবহন্তব্যায়োর
মার্গো দ্বিতীয়হরিবিক্রমপূত এবঃ ।

(a) Account briefly, in English, the allusion in one of the above extracts.

(b) Account for the case ending in ভর্তৃঃ. Why is Ganga called ত্রিশ্রোতস্ ? Expound the samasas in দ্বিতীয়হরিবিক্রমপূত, নিম্ভমক্ৰম্ ॥

4. Translate either of the following into English :—

- (a) উল্লসিঅদব্ভকঅলা হিই পরিচুত্তগচ্চশা মোরি
ওসরিঅপপুপত্তা মুঅন্তি অন্ম বিত লদাও ।
- (b) শহজে কিল জে বিনিদ্রিএ গহ দে কন্মা বিবজ্জনীএ ।
পত্তমালগকন্মদালুগে অধুকংবামিহুএ বি শোভি এ ॥

5. (a) Refer to the context and give, in your own Sanskrit, the substance of the slokas of the following groups :—

- (i) রম্যানি বীক্ষ্য মধুরাংচ নিশম্য শব্দান্
পযু'ংস্ককোভবতি যং সুখিতোহপি ক্রন্তঃ ।
উচ্চৈতলাঃ স্মরতি নুনমবোধপূর্ব্বং
ভাবস্থিরাণি জননাস্তরসৌজ্ঞানি ॥
- (ii) অৰ্ঘ্যেবো যদিদং ভুবনে ভূতনাথঃ শরণ্যে
মামধিগ্নিহ বৃষলকং যোজনানাং শতানি ।

ক্রাণ্ডা প্রাপ্তঃ স ইহ তপসঃ সন্ত্রাসাদোহিত্বাৎ

কাযোধ্যায়াঃ পুনরুপগমো দণ্ডকায়াং বনে বঃ ॥

(iii) মহাভাগঃ কামঃ নরপতিরভিন্নহিত্তিরসো

ন কলিষ্মণানামপখমপকটোহপিভজতে !

তথাপীদং শত্ৰুত্ৱপরিচিভবিবিজেন মনসা

জনা কীৰ্ণং মন্ত্রে হতবহপরীতং গৃহমিব ॥

(b) In what sense is the word ভাব used in ভাবস্থিরাণি ? Give other significations of the word. Expound and name the samasa in জননাস্তরম্ in the compound জননাস্তরসৌর্যদাপি in (i) a.

(c) Derive অবিহ্বল্ and give the past participle (ক্ত) and লুঙ্ third person singular forms of the root. What is the meaning of ভূত in ভূতনাথ ? Derive শরণ্য in (ii) A.

(d) Parse কাম্ ; in what sense is the word used here ? Derive বিবিক্ত and give either the লট্ or the লঙ্ form of the root, in the third person singular. Derive অপখম্ in (i) B.

(e) Explain the formations of স্ত্রুদ and expound the Samasa in অকাত্ত-বিবৰ্জনদাক্ষণঃ । Derive বিশিনট্, and give the first person singular forms of the root in লোট্ and লিট্ ; what is the nominative singular form of the base of মনোজ্ঞম্ in (ii) B.

6. Translate any five of the following extracts into Sanskrit :—

(a) Long ago, in a city called Kundian, a certain Brahmin teacher had seven pupils. Then that teacher under pressure of family, sent one of his pupils to ask his father-in-law who was rich in cows, to give him one.

(b) Once on a time two men, a Brahman and a Chandala remained fasting for some time on the banks of the Ganges. Of these two, the Brahman being pained by hunger, and seeing some Nishadas come that way, bringing and eating fish, thought within himself.

(c) Indra had a beloved son named Jayanta. Once on a time, when he, still an infant, was being carried about in the air by the

celestial nymphs, he saw some prince in a wood on the earth, playing with some young deer.

(d) There is a monarch of mountains famous on the earth under the name of Mandara, in whose groves all the gods roam. Its highest peak forms the pleasure garden of Siva, and he loves it more than Mount Kailasa.

(e) At present the hermit Sveta is on the other side of the eastern ocean, in a grove of the ascetics beyond the river Tarangini. That grove cannot be invaded by Death, so I will take you and place you there. But you must not return to this side of the Tarangini.

(f) Once on a time, on the twelfth day of the month, the king, after devotedly worshipping Vishnu, saw in a dream a prince of noble appearance approach him. But when he woke up he to his misfortune, could not see him any more.

SANSKRIT—PASS

Third Paper

1. Translate into English any three of following extracts.

(a) न ह वा अपुरोहितस्त राज्ञो देवा अन्नमदन्ति । तन्नाज्जाज्ज बक्ष्यामनो ब्राह्मणं पुरोदधीत देवा मेन्नमद्भ्यारिति । अग्निं वा एव ऋग्यान् राज्ञोपचरति यतः पुरोहितम् । उक्त पुरोहित एवाहवनीयो भवति जारा गार्हपत्यः पुत्रोहन्वाहार्धपचनः । स यतः पुरोहितारण्यं करोताहवनीय एव तज्जहोताथ यज्जामाये करोति गार्हपत्य एव तज्जुतोताथ यतः पुत्रारण्यं करोताह्वार्धपचन एव तज्जुहोति । त एनं पास्तनवो हविहता अतिश्रीताः ऋगां लोक-मतिबह्विं ऋगं च बलं च रात्रिं च विशं च । वा अपुरोहितस्त वा एव वै अपुरोहितस्त वै एवः । आहवनीय, गार्हपत्य, अह्वार्धपचन (the three sacrificial fires of those names.)

(b) अन्नमशितं ज्ञेता विधीयते । तस्त यः हविष्ठो धातुस्ततः पुरीषः भवति यो मध्य-मन्तम्रासं बोधिशिष्ठमन्नः । आपः पीताश्लेषा विधीयन्ते । तासां यः हविष्ठो धातुस्तज्जं भवति यो मध्यमन्तलोहितं बोधिशिष्टः स प्राणः । तेजोहविष्ठः ज्ञेता विधीयते । तस्त यः हविष्ठो धातुस्तदग्निं भवति यो मध्यमः स मज्जा बोधिशिष्टः सा वाक् । अन्नमयं हि सौम्य मन कानामन्नः प्राणतेजोमयी वागिति । (लोहित blood, सौम्य, vocative case.)

(c) पुरुषः सौम्यत हस्तगृहीतमानस्य पाहार्वातं स्तेरमकावीं परशुमन्त्रे तपतेति । स यदि

তত্ত্ব কৰ্তা ভবতি তত এবাস্ততান্নানং কুরুতে । সোহনৃত্যতিসকোহ নান্নানমন্তৰ্ধার পরণ্ডং তপ্তং
প্রতিগৃহ্ণতি । স দহতেহৎ ইত্যতে । অথ যদি তজ্জাকৰ্তা ভবতি তত এব সত্যান্নানং কুরুতে ।
স সত্যতিসকঃ সত্যোন্নানমন্তৰ্ধার পরণ্ডং তপ্তং প্রতিগৃহ্ণতি স ন দহতেহৎ ইত্যতে । সৌম্য,
vocative case উত, or ।)

(d) এবং হি দৃশ্যতে লোকঃ । যৎকরাচিদাকৃত্য যুক্তো পিণ্ডো ভবতি । পিণ্ডাকৃতিমুপম্ব
ঘটিকাঃ ক্রিয়ন্তে । ঘটিকাকৃতিমুপম্ব কুণ্ডিকাঃ ক্রিয়ন্তে । তথা হবর্ণং করাচিদাকৃত্য যুক্তং
পিণ্ডো ভবতি । পিণ্ডাকৃতিমুপম্ব রচকাঃ ক্রিয়ন্তে । রচকাকৃতিমুপম্ব কটিকাঃ ক্রিয়ন্তে ।
কটিকাকৃতিমুপম্ব শব্ভিকাঃ ক্রিয়ন্তে । পুনরাবৃত্তঃ হবর্ণপিণ্ড পুনরপরাকৃত্য যুক্তঃ খদিরাদার-
সদৃশে কুণ্ডলে ভবতঃ । আকৃতিরজ্জা চাচ্চা চ ভবতি ত্রযাং পুনন্তদেব । (ঘটিকা, কুণ্ডিকা—
ঘটি, কুণ্ডী, or their diminutives ; রচ, a necklace, শব্ভিক, another kind of
ornament, or probably an amulet.)

(e) যেধাং সংঘাতা অৰ্ধবন্তোহবয়বা অপি তেধামৰ্ধবন্তঃ । যেধাং হবয়বা অৰ্ধবন্তঃ সমুদ্যায়ী
অপি তেধামৰ্ধবন্তঃ তজ্জথা । একশচকুশ্মালার্শনে সমৰ্ধবন্তঃ সমুদ্যায়শ শতমপি সমৰ্ধম্ । একশ
তিসন্তৈলদানে সমৰ্ধবন্তঃ সমুদ্যায়শ খাৰ্ধপি তৈলদানে সমৰ্ধা । যেধাং পুনবয়বা অনৰ্ধকাঃ সমুদ্যায়ী
অপি তেধামনৰ্ধকাঃ তজ্জথা । একোহক্কো দর্শনেহসমৰ্ধবন্তঃ সমুদ্যায়শ শতমপ্যাসমৰ্ধম্ । একা চ
সিকতা তৈলমানেনহসমৰ্ধা তৎসমুদ্যায়শ খারীশতলম্প্যাসমৰ্ধম্ । (খারী a measure of solids
and liquids.)

(f) দয়মানশ্চাহমব্রবমেহি সান্নিহি স্বাং নয়েরং ত্বংপ্রিয়ারবসথমিতি ত্রিচতুরাণি পদান্মাদচলম্ ।
আপতচ্চ নীপিকালোকপরিপূর্ণ্যমানতিমিরভারং যষ্টিকুপাণপাণি নাগরিকবলমমরম্ দৃষ্টেব প্রবেপ-
মাণাং কন্তকামবদং ভজ্রে না ভৈবীঃ । অন্তায়মসিহিতিয়ো মে বাহঃ । অপি তু মূহুরয়মুপায়-
স্তনপেক্ষয়া চিন্তিতঃ । শয়েহং ভাবিতবিষবেগবিক্রিয়ঃ । ত্বয়্যাপ্যমী ব্যাচ্যা নিশি বয়মিমাং পুরীং
প্রবিষ্টোঃ । দৃষ্টমমেষ নায়কো দবীকরেশামুখিন্ সভাগৃহকোণে । যদি বঃ কল্মষশ্চবিং কৃপালুঃ
স এনমুজীবয়মং প্রাণানাহরদনাখায়া ইতি (দবীকর, a snake)

(g) ময়পি তং পিতৃব্যসনমাকৰ্ণ্য পর্যাশ্রণা সোহভিহিতঃ সৌম্য কিং তব গোপাশ্বাঃ ;
যন্তন্ত স্তুতো যক্ষকন্তমাদেবন্ত রাজবাহনন্ত পাদশুজ্ঞার্থং দেব্যা বহুমত্যা ইন্তন্তাসং কৃতঃ
সোহহমগ্নি । শক্যামি সহস্রমপি হন্তটানামুদ্যায়ানাং হবা পিতরং যোচয়িতুম্ । অপিতু সঙ্কলে
যদি কল্মষ পাতয়ন্তগঙ্গে শত্রিকাং সর্পং এব মে যন্তে । তন্মনি হতমিব ভবেদিতানবসিতবচন এব বয়ি
মহানানীবিবঃ প্রকারমন্ত্ৰণোদৈরমচ্ছিবঃ । তমহং মন্ত্রোবধধবলেনাভিগৃহ পূৰ্ণত্বমব্রবং ভজ্রে সিকং
নঃ সমীহিতম্ (শত্রিকা, Diminutive of শত্র ।)

2. Correct any five of the following passages pointing out the nature of the errors in each case.

- (a) অবেহনিক শিবানি ময়ি দয়ব ।
 (b) তে মাং সান্ত্রং দৃষ্টামে হর্ব উপজায়তে ।
 (c) যমন্ত প্রাতঃস্তুত্থেপত্ৰাম সৈব ইদানীং পুরতোহম্মভিষ্ঠতি ব্রহ্মচারী ।
 (d) অথ স বর্ষায়ামেয় এবব্রাজ হিষ্টা দারং পুত্রাশ্চ ধনানি চ গৃহানি চ ।
 (e) ততোহম্মর্ক রাত্রৌ প্রবৃকো নারীং দদর্শ রুদন্তীং বিশালাক্ষীম্ ।
 (f) অহো চিত্রমিত্রজালম্ । একা কোদিষ্ঠা যুতিকা শতানি পদ্মানি ভবতি শতানি চ মহান্তি পদ্মানেকা যুথিকা জায়ন্তে ।
 (g) ধিক্ জ্বং পাপ । বহির্গৃহস্ত তিষ্ঠ । মৈনক্ষিণং নমু কতমাশং দিশ্তন্তমেতিহর্যোঃ । পশ্চিমস্তাম্ । অথ কতমায়াং পুনরদেত্যসৌ । পূর্বয়ামেব । সহি গ্রহপতির্বিধানাং গ্রহনক্ষত্র-
 তারকানামীষ্টে ।

3. Compound the underlined words in any four of the following sentences :—

- (a) তত্রাহং কান্নীরেব পঞ্চ বড় বা দিবসান্ত্রবাংসম্ ।
 (b) অকং তমঃ প্রবিশন্ত্যাম্মহনঃ ।
 (c) অহস্তহনি ভূতানি প্রয়াস্তি যমমন্দিরম্ ।
 (d) কল্পে কল্পে দিবং চ পৃথিবীং চ সৃজতি ।
 (e) বর্ষশতং পুরুষস্ত্রায়ুর্ভবতি ।
 (f) বরাং মাতৃগাম পতাং দেবায়ুয় যুদ্ধে দেবসেনাং নয়তি ।

4. Change the voice in the following sentences :—

- (a) স স্তুধীর্ভবেৎ । (b) অজ্ঞাং গ্রামং বহতি । (c) আচার্যো মানবকং ধর্মং শাস্তি !
 (d) আচার্যো মানবকং ধর্মং বোধয়তি ।

5. Decline the pronoun অদস্ in the nominative and accusative cases, masculine, and neuter.

6. Give the লুট্ third person singular (active or both active and

passive, as the case may be), of any five of the ten typical verbs :

कृ, अद्, ह, दिव्, ह्र, भू, कथ, तन्, श्री, and ह्र् ।

7. Derive fully any four of the following forms :—

अकारि । राजह्वम् । शिरः । अर्धाम्पला । कुम् । अनुचान । कौर्ति । बावजीवम् ।
जङ् । पीतम् ;

8. Discuss the historical basis of the Mahabharata epic. What Vedic traditions have been preserved in it ?

Or,

Give an account of the several recensions of the Mahabharata and of the Ramayana.

9. Sketch briefly the history of the Grammatical literature in Sanskrit.

Or,

Trace the origin and development of the Sanskrit drama.

10. Write notes on the following authors —

Patanjali ; Sabarasvamin ; Sankuracharya ; Vachaspati misra ;
Madhavacharya.

1918

SANSKRIT—PASS

First Paper

1. *Either.* (a) Trace briefly in English the process of world creation, as delineated in the first chapter of Manu.

Or, (b) Give a synopsis in English of Draupadi's exhortation to Yudhisthira in the first Canto of the *Kiratarjuniya*.

2. Explain in Sanskrit, after Mallinatha. *either* of the following stanzas :—

(a) सद्योनिव श्रीतिरुज्जोऽम्बुजीविनः

सदानमानां ह्रस्वश्च वज्रुतिः ।

स सन्ततं दर्शयते गतस्वरः

कुडाधिपत्यामिव वज्रुताम् ॥

(b) স্বপ্নে লভ্য। দধতঃ কুবীৰলৈ-

রকুটপচ্য ইব শতসম্পদঃ ।

বিতৰতি ক্ষেমদেবমাতৃক।-

শিরায় তস্মিন্ কুরবশচকাশতি ॥

3. (a) Translate into English *any three* of the following *slokas* :—

(i) ততঃ পরভূর্ভগবানব্যক্তো ব্যঞ্জয়ন্নিতম্ ।

মহাভূতাদি বৃত্তোজাঃ প্রাচুরাসীন্তমোহুদঃ

(ii) এবং স জাগ্রৎশ্রদ্ধাভ্যামিদং সর্বং চরাচরম্ ।

সংজীবয়তি চাক্ষত্রং প্রমাপয়তি চাব্যয়ঃ ॥

(iii) ব্রাহ্মণং দশবর্ষং তু ভূমিপম্ ।

পিতাপুত্রৌ বিজানীয়াৎ ব্রাহ্মণস্ত তয়োঃ পিতা ।

(iv) যদবোচত বীক্ষ্য মানিনী

পরিতঃ স্নেহময়েন চক্ষুৰ্ভা ।

অপি বাগবিপত্ত্ব দুর্বচং

বচনং তদ্বিধীত বিস্ময়ম্ ॥

(v) অলতন্তুব জাতবেদসঃ

সততং বৈরীকৃতস্ত চেতসী ।

বিদধাতু শমং শিবেতরা

রিপুনারীনয়নাস্বসন্ততিঃ ॥

(b) Change the voice completely in (a) (i) or (a) (iv)

(c) Derive প্রমাপয়তি in (a) (iii) and give the লট্, third person of its root.

(d) Explain the formation of the compound পিতাপুত্রৌ in (a) (iii) : What case is ভয়োঃ and why ?

(e) What is the meaning of the suffix ময়ট্ in স্নেহময়েন, in (a) (iv) ?

Comment on the use of the genitive in বাগবিপত্ত্ব ।

4. Elucidate briefly in English the leading idea in *each* of the

following extracts :—

সর্বেষাং তু ন নামানি কর্ম্মানি চ পৃথক্ পৃথক্ ।

বেদশব্দেভ্য এবাদৌপৃথক্ সংহাস্ত নির্গমে ॥

(৪) উপপত্তিরদ্ব্যজ্ঞতা বলা-

দক্ষুমানেন নচাগমঃ কৃত ।

5 Translate into English *either* of the following passages :—

(a) নহু মনুঃ প্রণীতঃ স পৃষ্ঠঃ প্রভাবাচেতি ন যুক্তম্ । অহং পৃষ্ঠো ব্রহ্মীশীতি যুক্ত্যতে । অন্তপ্রণীতঃ চ কথং মানবীয়-সংহিতেতি । উচ্যতে । প্রায়শ্চাৰ্য্যশাস্ত্রমিহ শৈলী যং স্বাভিপ্রায়মপি পরোপদেশমিব বর্ণয়ন্তি ।

(b) যথা কেনচিৎকৃততীর্থে পরসি গন্তীয়েং পি প্রবেষ্টারঃ সন্তি তীর্থ করন্ত বিরলন্তঃ স্ত্রীতাবপি নিগূঢ়মপি ভবন্তবস্তুরি সতি বোদ্ধার সন্তি বক্তা তু ন শ্ললভঃ । অত ইয়ং চ সাহু বক্তীতি যুক্ত্যতে বিন্ময় ইতি তাৎপৰ্য্যার্থঃ ।

6. (a) Account for the *ribhaktis* in *any four* of the underlined words in the following extracts—

(i) তস্মিন্নগ্রে স ভগবান্মুখিবা পরিবৎসরম্ ।

(ii) ইদং শাস্ত্রং তু কৃত্বাসৌ মামেব স্বয়মাদিতঃ বিধিবদ্ গ্রাহয়ামাস ।

(iii) গুরো বসন্ সংচিস্থয়াদ্ভ্রক্ষাধিগমিকঃ তপঃ ।

(iv) দ্বিবাং বিবাতায় বিধাতুমিচ্ছতঃ ।

(v) হিতং ন যঃ সংশ্লুপ্তে স কিং প্রভুঃ ।

(vi) পরৈতি কার্শ্যং বশসা সমং বপুঃ ।

(b) Justify the use of the singular in ধর্মার্থাব্যুত্রে শ্রেয়ঃ ।

7. (a) The king Soma was among the Gandharvas. The gods and the sages were constantly thinking of him : 'How may this king Soma come unto us ?' Vac (বাক) said. 'The Gandharvas long for women. Buy with me, who am a woman, too'. 'No,' said the gods, 'how can we be without thee ?' 'Buy by all means,' said she. 'whenever you will have need of me, I shall return unto you.' 'Very well.' They bought the king Soma with her.

(b) The midland people were celebrating a sacrificial session (যজ্ঞ) on the banks of the Saravati. And Kāvāsa sat in the midst of it 'Thou art,' they said to him, 'the son of a slave-girl. We will not eat with thee.' He ran away in a rage, and glorified the Sarasvati with this hymn (হৃদ্য). She came up at this hill. Then they regarded him as free from sin. And turning round they said, 'We salute thee. O sage ! Do not kill us, Thou, whom she is following, art noblest amongst us.'

(c) 'I must study the Vedānta.'

'Admirable ; Are you, however, aware that the Vedānta is but the end of the Vedas ? Surely, you can't climb to the top at once.' 'You are "twice-born" I hope ?' 'Then I shall study the Veda first.'

"Oh yes, I am a Brahmin and am duly invested with the sacred thread too.'

"Well, but there are three Vedas, namely, the *Rigveda*, the *Yajurveda* and the *Samaveda*." 'Why, there's a fourth as well, the *Atharvaveda*.' 'Which of them would you study ?'

SANSKRIT—PASS

Second Paper

1. *Either*. (a) Give briefly, in English, the substance of the conversation between King Dushyanta and the disciples of Kanva and Sakuntala, as given in Canto V of the *Sakuntala*.

Or,

(b) The soliloquy of Janaka, as given in Canto IV of the *Uttararamacharita*.

2. (a) Translate into English *either* of the following groups :—

• GROUP A

(i) গ্রীবাভঙ্গাভিরামং মুহুরমুপততি স্তম্ভনে দন্তদৃষ্টিঃ

পশ্চাচ্চেন্দ্ৰেন্দ্ৰিঃ শরপতনভয়াত্ৰয়সা পূৰ্বকায়ম্ ।

দৰ্ভৈবৰ্দ্ধাবলীঢ়ৈঃ অমবিবৃতমুখজংশিভিঃ কীর্ণবস্ত্রম্ ।

পশ্চাদগ্রস্তত্বাধিযতি বহুভয়ং স্তোকমুৰ্খ্যাং অবাতি ॥

(ii) কিমত্রোচ্যতে প্রসবঃ খলু অকৰ্ষণৰ্যাস্তঃ স্নেহস্ত পরমং চৈতন্যস্তোবান্যং স্নেহং পিত্রোঃ—

অন্তঃকরণতত্ত্বস্ত দম্পত্যোঃ স্নেহসংশয়ঃ

জ্ঞানমগ্রস্থিরেকোহহমপত্যমিতি বধ্যতে ॥

Group B

- (ii) কোমং কেনচিদিম্পাপাত্তরশং মাসল্যাবিকৃতং
 নিষ্ঠাত্তশরণোপরাগস্থলভো লাকারসঃ কেনচিৎ ।
 অস্তেভ্যো বনদেবতাকরতলৈরাপৰ্বভাগোখিতৈ
 দত্তান্তান্তরণানি নঃ কিসলয়োন্তেদপ্রতিষল্গিত্তিঃ

- (ii) বৎসে সাম্প্রতিকমেবৈতৎ দুঃখিতৈদুঃখণিক্ষাপণানি ॥

যতঃ—পুরোৎপীড়ে তড়াগম্য পরীবাহঃ প্রতিক্রিয়া

শোককোভে চ হৃদয়ং প্রলাপৈরেব ধার্যতে ॥

- (b) Explain the formation of, and parse, পশ্চাক্তেন and ভূমসা in *śloka* (i) and অপতাম্ in *śloka* (ii), Group A.

- (c) Derive অবলীড় in *śloka* (i), Group A, and নিষ্ঠাত্ত in *śloka* (ii) Group B, and give the forms of the roots, in third person singular, লট্ (present tense) and লিট্ (past tense)

- (d) Expound and name the *samāsas* in পূৰ্ব্ভাকারম্ in *śloka* (i) Group A and আপৰ্বভাগোখিতৈঃ in *śloka* (i), Group B.

- (e) Derive দম্পত্যোঃ in *śloka* (ii), Group A, and কোমং মাসল্য in *śloka* (i), Group B.

- (f) Explain the formation of পরীবাহ and account for the singular use in শোককোভ in *śloka* (ii) Group B.

3. (a) Refer to the context, and give in your own Sanskrit, the substance of the *śloka* in either of the following groups—

GROUP A

- (i) শমপ্রধানেবু তপোধনেবু গৃহং হি দাহান্নকমন্তি তেজঃ ।

স্পর্শান্নুকুলা ইব সূর্য্যকান্তান্তদন্যভেজোহভিভবামন্তি ॥

- (ii) সন্তানবাহীনাপি মামুবাশাং

দুঃখানি সম্বন্ধুবিমোগজানি !

দৃষ্টে জনে প্রেমসি দুঃসহানি

শ্রোতঃসহস্রৈরিব সংগবন্তে ॥

GROUP B

(i) বহুভিষ্ঠতি বর্ণেভো নৃপাশং করি তখনম্ ।

তপঃবড় ভাগমক্ষ্যং দদত্যারণ্যকা হি নঃ ॥

(ii) বধা তিরশ্চীনমলাতশল্যং

প্রভূপ্তমবঃ সবিষশ্চ দংশঃ ।

তথৈব ভীত্রো হৃদি শোকশঙ্ক-

মর্দ্যাণি কুন্তরপি কিং ন সোড়ঃ ॥

(b) Change the voice of the first line of *sloka* (i) Group A.

(c) Expound the *samasa*s in তপঃবড় ভাগম্ and say in what বিভক্তি is নঃ in *sloka* (i) Group B.

(d) Derive প্রেরসি in *sloka* (ii) Group A, and give the nominative plural form of its base.

(e) Derive আরণ্যক in *sloka* (i), and তিরশ্চীন and প্রভূপ্ত in *sloka* (ii), Group B, and give লিট্ (past tense), and লুঙ্ (aorist) third person singular forms of the root of the last word (প্রভূপ্ত) ।

(f) Write grammatical notes on উভিষ্ঠতি in *sloka* (i) Group B.

4. (a) Explain in English, the allusions in the following extracts :—

(i) স্বধপরস্ত হরেকভরৈঃ কৃতং

ত্রিদিবমুঙ্ক তদানবকটকম্ ।

তব শরৈরধুনানতপর্কষিঃ

পুরুষকেশরিণশ্চ পুরা নথৈঃ ।

(ii) ভুরগবিজয়ব্যগ্রামুবীভিদঃ সগরাক্ষরে

কপিলমহসামর্য্যাং ম্লষ্টান্ পুরা প্রপিতামহান্ !

অগণিততনুপাতং তপ্তা তপাসি ভগীরথো

ভগবতি তব স্পৃষ্টানন্তিসিরাহুদদীধরং ॥

(b) Give the লট্ (present tense) third person singular form of the root of তপ্তা and parse চিরাৎ in *sloka* (ii), and expound the *samasa*s in উক্ তদানবকটকম্ ; in *sloka* (i).

5. Translate *either* of the following into English :—

(a) আতর্পহরিঅপুত্র বসন্তমানস জীঅসবস।

দিষ্টোসি চ অকোরঅ উদ্বয়ঙ্গল তুমং পসাএসি ॥

(b) অসি সি মে চ অকুরঃ দিন্নো কামস গহিঅধণুঅস।

পাহঅগ্গণজুঅইলকখো পঙ্কব্ ভহিঅো সরো হোদ্ব্য।

6. Translate *any five* of the following extracts into Sanskrit—

(a) There is in territory of Kalinga a city of the name of Sobhavati. In it there was a wise Brahmana, named Yasaskara, who had offered many sacrifices, and had an excellent wife, named Mekhala.

(b) There the moon, that gladdens the eyes of the happy, rose up, adorning the face of the east : and though it lit up the quarters of the sky, it closed in me all hopes of life.

(c) When the Brahmana had told his story in these words, the prince said to the other Brahmana. 'I am much pleased ; now tell me, how did you escape from so great a danger' ?

(d) Once on a time a king of the Daityas, desiring a son, went to the bank of the Ganges and with his wife performed asceticism for a hundred years to propitiate Brahma.

(e) When the ambassador said this, the whole court was in a state of excitement ; but the king, though in wrath, said, "Away with you, your person is inviolable, otherwise you could not have escaped alive."

(f) There a combat took place between the gods and the Asuras, and Vidyutprabha rushed in wrath upon Indra. And Indra finding himself gradually worsted by the Daitya in the interchange of missiles, flung his thunderbolt at him.

SANSKRIT—PASS

Third Paper

1. Translate *any three* of the following passages into English :—

(a) দেব ! শিরসি দেবতাজ্ঞানদায়ৈনং নির্ধৌং বশং বীকৃত্য, মালবেল্লনগরং প্রবিষ্ট তত্র গৃঢ়তরং বর্ধমানস্তত্র রাজঃ সমস্তমুদন্তজাতং বিদিত্বা প্রতাগমন্। মানী মানসারঃ ষট্টসৈনিকা-
নুমত্তান্তরায়ে সংপরায়ে ভবতঃ পরাজয়মদুভূয় বৈলক্যালকাক্ষদয়ো বীতদয়ো মহাকালনিবাসিমন-
ধরং মহেশ্বরং সমারাদ্য তপঃ প্রভাবসন্তষ্টাদাদেকবীরাত্তিরীঃ ভয়দাং গদাং লঙ্কাস্থানমপ্রতিভটঃ
মন্তমানো মহাভিমানো ভবন্তমভিযোক্তুমদ্যুত্ক্রে।

(b) নিজরাজ্যভিলাষী মিতভাবী সোমকুলাবতঃসো রাজহংসো যুনিমভাবত। ভগবন্।

মানসার: প্রবলেন দৈববলেন মাং নির্জিত্য মত্তোগ্য রাজ্যমভবতি। তদহমত্যাং তপো
বিরচ্য তমরাতিমুদুলয়িত্বামি লোকশরণেন ভবংকারুণ্যেনিতি নিরমবস্ত্রং প্রাপ্তবমিতি।
ততঃকালজ্ঞতপোধনো রাজানমবোচং। সখে! শরীরকাৰ্শ্যকাশিণা তপসালম্। বহুমতী-
গৰ্ভস্থঃ। সকলরিপুকুলমৰ্দনো নুনং সংভবিত্যতি। কখন কালং তুষ্ণীমাসযেতি।

(c) ততো মৰ্ষয় ভগবন্ অহুমিরেবা পাশস্ত ইত্যমুনান্যামনোহপি বিবিধৈঃ উপাধ্যায়
খলিভমেকং ক্রমযেতি বক্তাজ্জলিপুটে: প্রসাদমানোহপি বশিষ্ঠে: পুত্রমাকৃষান্তপসঃ প্রত্যাহমিতি
নিবার্ঘ্যমাণোহপ্যত্রিণী রোবাবেশবিবেশ ছৰ্ব্বাসা ছবিনীতে ব্যপনয়মিতে বিভাজনিতামুন্নতিমিয়ান্
অধস্তানগচ্ছ মতালোকম্ ইত্যুক্ত তচ্ছাপোদকং বিসমুজ্জে।

(d) অন্তমিন্ দিবসে তৈরবাচার্যোহপি রাজানং ব্রহ্মঃ যযৌঃ। তস্মৈ রাজা সান্তপুং
সপরিজনং সক্রোধমাস্তানং নিবেদিতবান্। স চ বিহস্তোবাচ তাত ক বিভবঃ ক চ বয়ং
বনরজিতা। ধনোদ্ধা নারতালং লতেব মমস্মিতা! ভবাস্তশা এব ভাজনং ভুতে: ইতি। দ্বিধা
ককিং কালং জগাম।

2. Give the forms, in the third case-ending singular and plural of *any four* of the following words—

নির্জর, নিশা, বারিবাহ, খেতবাহ, মঘবৎ and বৃহৎ।

(b) Give the forms, in লট্ and লৃট্, third person singular of *any four* of the following roots :—ক্ৰ, দন্শ, দৃশ, বৃৎ, বস, হৃজ্

(c) Give the derivation of *any three* of the following words :—বাতমজ, শুক, বিশ্বস্, কামদ্রবা, বায়জুক and শীর্ষচ্ছেদ।

3. (a) *Either* Give the various instances in which a word takes the second case-ending.

Or,

Account for the case-endings in the words underlined in the following passages :—

(i) মাসেন ব্যাকরণমধীতে।

(ii) কেশেযু চমরীং হস্তি।

(iii) অখমেধেন যজ্ঞেত।

4. Correct or justify *any three* of the following :—

- (a) অতিসৰ্বশ্চে সৰ্বায় নমঃ ।
- (b) তপসঃ কলানাম্ বিধাতা ।
- (c) শত্ৰুং পরাজয়তি রাজা ।
- (d) হৃগঙ্কং পুষ্পং চিনোতি ।
- (e) শ্রীকামেন দেব্যা উপাসিতব্যাঃ ।

(b) Explain the *samāsas* in *any three* of the following words :—

কৃষ্ণসর্পঃ, একবীরঃ, সপ্তর্ষয়ঃ, নীললোহিতঃ ।

5. *Either*, (a) Explain the *Mahabharata* in the Sanskrit literature, and discuss the date and the method of its composition.

Or, (b) Trace the growth of the drama in Sanskrit, and notice the special features of it with illustration from some important works,

6. *Either*, (a) Give an account of the ethical poetry in Sanskrit with notes on some of the important works.

Or, (b) Give the cardinal doctrines of Hindu philosophy, and give an account of the Sankhya system.

7. Write notes on *any two* of the authors named below with an account of the work of each :—Bana, Bhartrihari, Sriharsha, and Damodar Misra.

1919

SANSKRIT—PASS

First Paper

1. *Either*, Carefully enumerate the respective duties assigned by *Manu* to each of the four castes.

Or, State how, according to *Manu*, a student is to conduct himself, when residing with his *Guru*.

2. Explain in your own words in English the thought and purpose of *any three* of the following stanzas.—

- (a) তত্ত্ব.....সবসদাঙ্ককম্ ।

(See Manu Canto I sl. 74.)

- (b) কৰ্ম্মণাং চ বিলেকায়.....প্রজাঃ ।

(See Manu Canto I sl. 26.)

(c) কাশ্যকৃত্য ন প্রাপ্ত্য.....বৈদকঃ ।

(See Manu Canto II sl. 2.)

(d) একাদশং মনোজ্ঞেয়ং.....পঞ্চকৌ গণৌ ।

(See Manu Canto II sl. 92.)

3, Comment on the technicalities of *any four* of the following extracts :—

(a) সাবিজীপতিতা ত্রাত্যা ভবস্ত্যৰ্ঘবিগৰ্হিতা ।

(b) ত্রাক্ষেণ বিশ্রুতীর্ধেন নিত্যকালমুপস্পৃশেৎ ।

(c) স হি ত্রক্ষাঞ্জলিঃ স্মৃতঃ ।

(d) ত্রিধৰ্গ ইতি তু স্থিতিঃ ।

(e) নৈত্যকে নাশ্তানধ্যায়ো ত্রক্ষসত্রং হি তৎ স্মৃতম্ ।

4. Explain in Sanskrit either of the following groups :—

Group A

(a) সিতং সিতিন্না.....বাচমবোচদচ্যুতঃ ।

(See Sisupalabadham Canto I sl. 25.)

(b) তেজঃ ক্ষমা.....রসভাবিদঃ কবেঃ ।

(See Sisupalabadham Canto II sl. 83.)

Group B

(a) করোতি কংসাদি মহীভূতাং.....স৷ তিরক্ষিয়া ।

(See Sisupalabadham Canto I sl. 39.)

(b) ভৃগুবিষাগঃ পরেণাপি.....মহার্ঘবঃ ।

(See Sisupalabadham Canto II sl. 31.)

(i) Fully explain the use of the instrumental case in সিতিন্না, and expound the samasa in বিজাবলিবিজনিশাকরাংভৃতিঃ in verse A (a).

(ii) Parse the word নৈকান্তং in verse. A (b).

(iii) Account for the feminine gender in, and show its connexion with যৎ in verse A (a).

5. Translate *any two* of the following into English, adding notes to clear up the idea in each case.

(a) উদীর্ণরূপে প্রতিরোধকং—নিরপায় সংগ্রহ।

(See Sisupalbadha Canto I sl. 32.)

(b) বলাবলেপাং—ভবান্তরেষপি।

(See Sisupalbadha Canto I sl. 72.)

(c) তপেন বর্ষা—বয়ুঃ।

(See Sisupalbadha Canto I sl. 66.)

6. Expand in English the ideas contained in *any four* of the following extracts, with reference to the context in each case :—

(a) নীতিরূপাদি যদ্যপ্যঃ পরন্তুয়ানিনো হ্রিয়ে।

(b) উপায়মাস্তিতস্তাপি নন্তুস্তার্থাঃ প্রমাততঃ।

(c) কথাপি খলু পাপানামলমশ্রয়েসে।

(d) অবধাবলমারভো নিদানং ক্লয়সম্পদঃ।

(e) বৃহৎসহায়ঃ কার্যাস্তং ক্ষৌদ্রীয়ানপি গচ্ছতি।

(f) মহীয়াংসঃ প্রকৃত্যা মিতস্তাৰিণঃ।

7. Translate the following into Sanskrit :—

(a) Once on a time there lived a pious king of the name of Indradymna, who, after he had performed great religious austerities was told by the god Vishnu to form an image of Jagannath, and put it in the bones of the god Krishna, who had been killed by the chance arrow of a hunter, and whose bones had been put into a box by some person.

(b) She has never been taught to think on serious subjects, and for the last half year she has been given up to nothing but amusement. She has been allowed to dispose of her time in the most idle manner.

SANSKRIT—PASS

Second Paper

1. (a) Explain any two of the following passages in Sanskrit.

(See Sakuntala Act IV sl. 1.)

(ii) পাভুং ন অখমং—সকৈঃসুজারতাম্ ।

(See Sakuntala Act IV sl. 8.)

(iii) রথেনাসুদৃশ্যাত্তিমিতগতিনা—ইতি লোকস্ত ভরণাৎ ।

(See Sakuntala Act VII sl. 8.)

2. (a) Translate any two of the following passages into English :—

(i) রম্যাস্তরং—শিবচ্চ পত্নাঃ ।

(ii) স্বপ্নো হু মায়ী হু—তটপ্রপাতাঃ ।

(iii) অস্মৎ পরং—পিবন্তি ।

3. (a) Explain any two of the following passages in Sanskrit :—

(i) মৌর্য্যন্তেকসি—ভেৎসন্তি ।

(See Mudra-rakshasa. Act sl. 23.)

(ii) লেখোহয়ং ন মমেতি—গ্রাম্যমত্রোত্তরম্ ।

(See Mudra-rakshasa.)

(iii) যো নষ্টানপি—বিপর্ষন্তি ।

(See Mudra-rakshasa.)

4. Translate any two of the following passages into English—

(i) কোটিল্যঃ—ইত্যবৈতি ।

(See Mudra-rakshasa Act. I sl. 6)

(ii) ইষ্টাঙ্কজং—দৈবমুচ্ছমানম্ ।

(See Mudra-rakshasa Act. II sl. 8.)

(ii) আৰ্ঘ্যাজয়েব—ভিনন্তি লজ্জা ।

(b) Expound the *samasas* in the words সমারঃ and মৌর্য্যেনোঃ in extract

(i)

5. Either, Delineate the skill with which Kalidass introduced Sakuntala into the presence of the king at the close of the drama.

Or, Show from the subsequent development of the plot how Chanakya verified his statement—

নম্ বাক্যস এব অস্মদকুলিপ্রণয়ী সংবৃত্ত ইতি ।

6. Translate the following into Sanskrit :—

(a) Then as he was returning in triumph, on a path which led him near the Himalayas, he made his army encamp, and went hunting in a wood. And, as chance would have it, he saw there a Kinnara, adorned with splendid jewels, and he pursued him on his horse given by Indra, with the object of capturing him. The Kinnara entered a cavern in the mountain, and was lost to view, but the prince was carried far away by that horse.

(b) A king who desires prosperity, must listen to servants who wish him well, and they must give their lord at the right time useful counsel, even without being asked. So, O king, if you feel confidence in me, if you are not angry, and if you do not wish to conceal your feelings from me, and if you are not disturbed in mind by business, I would ask you a certain question.

SANSKRIT—PASS

Third Paper

1. Translate any three of the following extracts into English—

(a) এবং ক্রমেনাতিজ্ঞাত্তে কিয়তাপি কালে বাসঃ পণ্ডিতবরঃ পরং রাজা সান্তমানোহপি প্রান্তনকৰ্ণতো দারিত্র্যমশ্রুবতি । এবং হিতে নৃপতিঃ কদাচিত্রাত্ৰাবেকাকী প্রচ্ছন্নবেশঃ স্বপূরে চরন্ বাণগৃহমেতাতিষ্ঠং । তদা নিপীথে বাণো দারিত্র্যাদ্ ব্যাকুল স্তথা কান্তাং ব্যক্তি দেবি ! রাজা কিয়দ্বারং মম মনোরথমপুরয়ৎ অত্ৰাপি পুনঃ প্রার্থিতো দদাত্যেব । পরন্তু নিরন্তরপ্রার্থনারসে মূৰ্ছস্তাপি জিহ্বা জড়ীভবতি । ইত্যুক্তা মুহূৰ্ত্তাঙ্কং মৌনেন হিতঃ । সতাপি দারিত্র্যে রাজো বক্তুং ময়া স্বয়মশক্যম্ । কিঞ্চ দেবি ! দিবসস্ত পঞ্চমভাগে প্রাপ্তঃ ক্ষুধার্তাঃ পশ্চাত্তাত্তীতি তদেব মে হৃদয়ং ছনোতি ।

(b) রাজাপি কৃতান্তর্হিত এব শ্রুতসকলবৃন্তান্তঃ সভামাগতঃ কাপালিকঃ দণ্ডবৎ প্রশ্নয়া “যোগীন্দ্র ! পরোপকারপরায়ণ ! মহাপাপিনা ময়া হতসা পুত্রস্ত প্রাণদানেন মাং রক্ষ” ইত্যাহ । অথ কাপালিকোহপি “রাজন্ মা ভৈষীঃ । পুত্রস্তে ন মরিস্ততি শিবপ্রসাদেন গৃহমেষ্ততি । পরং অশানভূমৌ বৃক্ষিাগরেণ হোমত্ৰয্যাণি প্রেবয়” ইত্যবোচত । ততো রাজা “কাপালিকেন বহুভং তৎ সর্বং তথা কুরু” ইত্যুক্তা বৃক্ষিাগরঃ প্রেবিতঃ । ততো রাজো গৃহদ্বারপেণ ভোজোহপিতত্ৰ নদীপুলিনে নীতঃ । “যোগিনা ভোজো জীবিতঃ ইতি খ্যাতিশ্চ সমভূং ।

(c) স হেবমুক্তে মাং প্রত্যাবাদীৎ । “মহান্নন ! অহং খলু ক্রুরকর্মী । জাত্যা চাণ্ডালঃ ন চ ময়া ত্ৰ্যমাবলুকেন কৃতুহলিনা বা বদ্ধঃ । মম খলু স্বামী পক্ষাধিপতিরিতো নাতিদূরে চণ্ডালাধিষ্ঠিতায়াং ভূমৌ কৃতাবস্থানঃ । তস্ত হুহিতা কৌতুকময়ে প্রথমবয়সি বর্ততে । তস্তাৎ

কেনাপি ছরাস্ত্রনা কথিতো যথা কিল মহর্ষেজ্জীবালোরাত্রমে এবং গুণবিশিষ্টঃ শুকস্ফিষ্ঠীতি ।
তথা চ ঞ্জংগপন্নকৌতুকয়া তদগ্রহণায় বহব এবাপরৈহপি তমাদৃশঃ সমাদিষ্টাঃ তদন্ত পুণ্যৈর্ময়া-
সাদিতোহসি । তাং তৎপাদমূলং নয়ামি । অধুনা বজ্জু মোচনে চ তে সৈব প্রভবতীতি ।

(d) তন্নিম্নবসরে রাজমন্দিরে রাজপুত্রঃ কেনাপি চৌরেণ মারিত ইতি মহান্ কোলাহলো
জাতঃ । রাজ্ঞাপি স্বপুত্রমার্গণায় সৰ্ব্বৈহধিকারিণঃ প্রেবিতঃ ততস্তে বাবৰ্ষিপণিমধ্যে বিলোকয়ন্তি
তাবদাভরণহস্তো দেবদত্তনামকস্ত ব্রাহ্মণস্য ভৃত্যো দৃষ্টঃ । ততস্তদাভরণং রাজকুমারস্যোতি জাহ্না
তং বদ্ধ্বা রাজসকাশং নিযুঃ । পশ্চাদভৃত্যঃ কথয়ন্তি অরে পাপাচার । কথমেতদাভরণং তব
হস্তে সমাগতম্ ? তেনোক্তং মম হস্তে দেবদত্তেন ব্রাহ্মণেন দত্তং তস্যাং ভৃত্যঃ । বিপণিমধ্যে
এতদাভরণবিক্রয়েণ ধনমানয়েতি কথিতং চ । ততো রাজা দেবদত্ত আকারিতো ভণিতশ্চ । তৌ
দেবদত্ত এতদাভরণং তব হস্তে কেন দত্তম্ ? দেবদত্তেনোক্তং ন কেনাপি দত্তম্ ।

2. Explain etymology of *any five* of the following :—

- (a) স্বধৰ্ম্মা । (b) কেশাকেশি ; (c) নেদিষ্ঠম্ ; (d) বৰ্ষায়ান্ ; (e) রাজধান্ ;
(f) অপদম্ ; (g) হিমালী ; (h) গবাক্ষঃ ।

3. Explain and illustrate by simple Sanskrit sentences the difference of meaning of any four of the following pairs :—

- (a) আচার্য্য and আচার্য্যাণী ; (b) যেষাম্ and যানাম্ ; (c) যবনী and যবনানী,
(d) মহাকাব্যম্ and মহাবাক্যম্ ; (e) কৃষ্ণসখা and কৃষ্ণসখা ; (f) হৃগন্ধি and হৃগন্ধম্ ।

4. (a) Give the লুঙ্ third person singular forms of *any three* of the following roots :—

- (i) অন্ (to throw) ; (ii) জন ; (iii) পদ ; (iv) হে ; (v) অদ্

(b) Give the causative (প্যস্ত) forms of any three of the following roots :—(i) হন্ ; (ii) সন্ ; (iii) ধৃ ; (iv) ঈ ; (v) জী (v) হ্রী ।

5. Account for the case endings (বিভক্তি) in any four of the underlined words in the following—(a) দত্তমোহন্তি কল্পয়ম্ (b) মাসেন ব্যাকরণমধীতম্
(c) স সাধুনাং মতঃ (d) অহং ত্বাং ত্বায়া মন্তে (e) দক্ষিনেন গ্রামম্ ; (f) জটাজিহ্মাপসঃ ।

6. Correct or justify *any five* of the following :—

- (a) স গুরুং গুরুমতি, (b) স একাদশীমুপবসতি ; (c) সোহধ্যয়নে বিরমতে ; (d) রামো

বগবান্ধবসতি, (৫) বালকো গুরবেহধিক্রুধ্যতি; (৬) ভক্তির্জ্ঞানে কল্পতে; (৭) স্বদেশায় গচ্ছতি ।

7. Describe the origin and development of Sanskrit poetry.

8. (a) Give short account of any five of the following (1) Kuma-rila Bhatta; (ii) Arya Bhatta; (iii) Kaniska, (iv) Vatsabhatti (v) Subandhu; (vi) Arjuna Misra; (vii) Silhana.

(b) Write short notes on any five of the following :—(i) Setu-bandha (ii) Ghatakarpura; (iii) Romaksidhanta; (iv) Probodha chandroday; (v) Karpuramanjari (vi) Parvatiparinaya; (vii) Amaru-sataka.

6. Discuss in detail the question of the Kalidasa's date.

1920

SANSKRIT—PASS

First Paper

1. Name the six main sources to which *Manu* attributes the origin of Dharma, and write brief notes on each of these sources.

2. Translate into English any *two* of the following stanzas :—

(a) লৌকিকং বৈদিকং বাপি তথাধ্যাত্মিকমেব চ ।

আদিত্যাত যতো জ্ঞানং তং পূৰ্ব্বমভিবাদয়েৎ ॥

(b) ধর্মার্থৌ যত্র ন স্যাতাং গুহ্যং বাপি তদ্বিধা ।

তত্র বিজ্ঞা ন বক্তব্যং শুভ বীজমিবোষরে ॥

(c) তমসা বহুপেণ বেষ্টিতা কর্ণহেতুনা ।

অস্তঃসংজ্ঞা ভবন্তেতে সুখদুঃখসমবিতাঃ ॥

(d) মেথলামজিনং দণ্ডমূপবীতং কমণ্ডলুং ।

অপ্পু প্রাপ্ত বিনষ্টানি গৃহীতান্তান্তানি মদ্রবং ॥

3. Give in your own words in English the substance of any *two* of the following stanzas :—

(a) সুখং হবমতঃ শেতে চ প্রতিবর্দ্ধতে ।

সুখং চরতি লোকেহ্মিন্নবসন্তা বিনশ্চতি ॥

- (b) নারদঃ স্যাদাৰ্হোহপি ন পরজোহকর্ষধীঃ ।
 বখাস্যোদিকতে বাচা নালোক্যাং তামুদীরয়েৎ ॥
- (c) বিজ্ঞা ব্রাহ্মণমেতাহ শেবধিষ্টৈহ্মি রক্ষ মাং ।
 অহুধককাং মাং মাদাহা স্যাং বীৰ্যবন্তমা ॥
- (d) ক্রমন্তি সর্বা বৈদিকা জুহোতিবজ্রতক্রিয়াঃ ।
 অকরত্বকরং জেয়ং ব্রহ্ম চৈব প্রজাপতিঃ ॥

4. Explain in English, or in your own vernacular *either* of the following groups, but not both :—

GROUP A

- (a) নিজোজসৌজাসয়িতুং জগদ্ভ্রহ্মা-
 হুপাজিহীধা ন মহীতলং যদি ।
 সুমাহিতৈরপ্যানিরাপিতন্ততঃ
 পদং দৃশঃ শ্রাঃ কথনীশমাদৃশাং ॥
- (b) বিপক্ষমখিলীকৃত্য প্রতিষ্ঠা থলু তুল্লভা ।
 অনিষ্টা পক্ষতাং ধূলিরদকং নাবতিষ্টতে ॥

GROUP B

- (a) স বাল আসীষপুবা চতুভূজৈ
 মুখেন পূর্ণেন্দ্রনিভস্ত্রিলোচনঃ ।
 যুবা করাক্রান্তমহীভূদুচ্চকৈ-
 রসংশয়ং সম্প্রতি তেজসা রবিঃ ॥
- (b) স্বয়ং প্রণমতেহ্নেহপি পরবায়াপেযুর্বি ।
 নিদর্শনমাসায়াণাং লঘবর্ষকৃতং নরঃ ॥

5. Translate into English, indicating the context of any *two* of the following stanzas :—

- (a) উপলুতং পাভুমদো মদোকৈতৈ-
 স্তমেব বিশ্বস্তর বিশ্ববীশিবে
 ঋতে রবেঃ কালয়িতুং ক্রমেত কঃ
 কপাতমন্ডাপ্তমলীমসং নভঃ ॥

(b) বিনয়স্বরি সেনায়াঃ সাক্ষিমাট্রেহপদিজ্ঞতাং ।

কলভাজি সন্নীক্যোক্তেবুদ্ধৌর্ভোগ রবাস্তনি ।

(c) হরতাধঃ সম্ভ্রতি হেতুরেয়তঃ

শুভস্ত পূৰ্ণাচরিতৈঃ কৃতং শুভৈঃ ।

শরীরভাজাঃ ভবদীয়দর্শনম্

ব্যানক্তি কালক্রিতয়েহপি যোগ্যতাং ।

In (a) derive বিশ্বস্তর, parse রবেঃ and give the *sumasa* of the underlined word.

In (b), conjugate the root of সমীক্য in লিট্, third person, singular. In (c), give the meaning of যোগ্যতা ।

6. Give the substance in your own vernacular or in English, either of the following groups, but not both :—

GROUP A

(a) অমানবং জাতমজং কুলে মনোঃ

প্রভাবিনং ভাবিনমন্তমান্বনঃ ।

মুমোচ জানন্নপি জানকী ন যঃ

সদাভিমানৈকধনা হি মানিনঃ ।

(b) অসম্পাদয়তঃ কক্ষিতর্থে জাতিক্রিয়াশুণৈঃ ।

বদুচ্ছাশকবং পুংসঃ সংজ্ঞায়ৈ জন্ম কেবলম্ ।

GROUP B

(a) উদাসিতারং নিগৃহীত মানসৈ-

গৃহীতাধ্যাত্মদৃশা কথঞ্চন ।

বহির্বিকারং প্রকৃতেঃ পৃথক বিদ্বঃ

পুরাতনং ত্বাং পুরাণং পুরাবিদঃ ।

(b) নাক্ষতে দৈষ্টিকতাং ন নিপোদতি পৌরষে ।

শকাধৌঃসংকবিবিব স্বয়ং বিদ্বানপৈক্যতে ।

7. Translate into Sanskrit the following extracts :—

(a) The story of Asoka is well known, and it is well authenticated. He wrought salutary changes in the hearts of men, and in their attitude towards their neighbours.

(b) Prayer to God should be offered up in a calm spirit. He prays in vain, who prays in a disturbed state of mind. Anger, anxiety, or any kind of restlessness is the very opposite of a prayerful attitude.

(c) A traveller once set out on a long journey on foot. While he was crossing a wide plain far from home, he saw a lion at a distance coming towards him. When the traveller walked fast, the lion walked fast ; when he stopped, the lion stopped.

SANSKRIT—PASS

Second Paper

1. *Either*, Give in English a short sketch of the plot of the *Mudrarakshasa*.

Or, State briefly in English the principal features in the character of either Chanakya or Rakshasa, as depicted in the *Mudrarakshasa*.

2. (a) Refer to the context and give in your own Sanskrit, the substance of one of the following *slokas* :—

- (i) कार्या सैकतलीनहंसमिथुना श्रोतोवहा मलिनी
पादास्त्रामभिज्ञो निषण्णहरिणो गौरौष्ठरोः पावनाः ।
शाथालक्षितवक्त्रस्तु तरो निर्मातुमिच्छामाधः
शूरे कृष्णगुणं वामनयनं कण्ठ्यमानां मुनीन् ॥
- (ii) वृक्षीणामिव नीतिविक्रमगुणव्यापारशान्तिद्विषां
नन्दानां विपुले कुलेहकल्लणया निवर्त्याकवम् ।
चिन्तावेशसमाकुलेन मनसा रात्रिस्त्रिंशं जाग्रतः
सैवेयं मम चित्रकर्मरचनाभिस्त्रिं विना वर्धते ॥
- (iii) रम्यांश्चेष्टि यथा-पूरा प्रकृतिभिर्न प्रताहं सेव्यते
शयाप्रान्तिविवर्द्धनैर्विगमयद्व्युत्पिन्न एव रूपपाः ।
दाक्षिण्येन ददाति वाचमुचितामन्तः पुरेष्ठो यदा
गोत्रेषु खलितस्तदा भवति च त्रीडाविलक्ष्मिचरम् ॥
- (iv) किं शेषस्तु उरव्याथा न वपुषि क्त्वां न क्षिपत्येष यदा
किंवा नास्ति परिश्रमो दिनपतेरास्ते न यस्मिन्तलः ।
किञ्चक्षीकृतमुत्तुङ्गं कृपणवत् क्त्वाद्यो जनो लज्जते
निर्दुष्टं प्रतिपन्नवस्तु सतामेत किं गोत्रव्रतम् ॥

(b) Explain the formations of সৈকত in (i) রাত্রিলিবন্ in (ii) and প্রতাহন্ in (iii).

(c) Express in one word নির্মাতৃমিচ্ছামি in (i) and account for the change of স into ষ in নির্ময় ।

(d) Expound the *samasas* in নীতিবিক্রমশূণ্যপারশান্ত্বিবাম্ in (ii) and give the nominative singular form of its base. Is there any other form of শান্ত ?

(e) Why not বিগময়তি insted of বিগময়তি in *sloka* (iii). What is the meaning of the word গোত্র in গোত্রেষু স্থলিতঃ in (iii). Give the other meanings of the words.

(f) Derive শ্বে in (iv) and say how it gets its present meaning. Give the third person singular লট্ (present tense) and লিট্ (past tense), forms of the root.

(g) Derive নির্ভূঢ় and প্রতিপন্ন in (iv) and give the লিট্ (past tense) and লুঙ্ (aorist) third person singular forms of the root.

(h) Why not দিনপত্নাঃ insted of দিনপতেঃ in *sloka* (iv).

3. Translate the following extracts into English :—

(i) আৰ্য্য, প্রথমমেব দেবশ্চ চন্দ্রশ্চ শুক্ল নন্দভবনপ্রবেশমূলভা সূত্রধরণে দাক্ষবর্ণা কনক-
তোরণস্তাসাদিভিঃ সংস্কারবিশেষৈঃ সংস্কৃতং প্রথমরাজভবনদ্বারম্ অস্মাভিরিদানীম্ অভ্যন্তরে সংস্কার
আধেয়ঃ ।

(ii) কথম্ সমুদ্রব্যবহারী সার্থবাহী ধনমিত্রো নাম নৌব্যাসনে বিপন্নঃ । অনপত্যশ্চ কিল
তপস্বী । “রাজগামী তস্তার্থসঞ্চয়” ইত্যেতদনাতো ন লিখিতম্ । কষ্টং ত্বনপত্যতা । বেত্রবতি,
মহাধনবাদ্ বহুপত্নীকেন তত্রভবতা ভবিতব্যম্ । বিচার্য্যতাম্ যদি কাচিদাপন্নস্বা তস্ত সার্থবাহুস্তাত্ ।

(b) What is the meaning of the word সার্থ in সার্থবাহ in (ii) ? In what sense is ব্যসন used in (ii) ? Give the other meanings of the word.

(c) In what sense is the word তপস্বী used in (ii) ? Give the derivation of the word.

(d) Explain the formation of the base of তত্রভবতা in (ii) and expound and name the *samasa* in the word.

(e) Derive *ज्ञा* in (ii), and give the present (लट्), the past (लिट्) and the aorist (लृट्) forms of the root in the third person singular.

(f) Derive and give the meaning of the word *अपत्य* in (ii)

4. Explain in English the allusions in *one* of the following :—

(a) कर्णेनेव विवाङ्मनैकপুৰুষব্যাপাদিনী পক্ষিতা ।

হস্তং শক্তিরিবাভূৎ নং বলবতী বা চন্দ্রগুপ্তং ময়া ।

স্বা বিষ্ণোরিব বিষ্ণুগুপ্তহতকাত্তান্তিকশ্রেয়সে

হৈড়িম্বেষমিবেত্য পৰ্বতনৃপং তদ্ব্যমোবাবীত ॥

(b) অথপরস্য হরেকৃত্যে: কৃতং ত্রিদিবমুক্তদানবকটকম্ ।

তব শরৈরধুনানতপৰ্বতি: পুরুষকেশরিপশ্চ পুরা নথৈ: ॥

5. Translate one of the following into English :—

(a) জীঅশসঅং সমধিয়ং কো গাম গদাগদং ইহ করেই ।

অত্যাগগমনগুৰী এছগো অণা জই এ হোই ।

(b) এসা বিপিএণ বিশা মমেইরঅণিং বিসাজদোহঅরং ।

গরুঅং বি বিরহদুঃখং আসাবকো সহাবীদি ।

6. Translate any *five* of the following extracts into Sanskrit :—

(a) Once on a time an ascetic wandering from one shrine to another reached a temple of the three eyed divinity and there he offered his devotions for a long time, renouncing all foods and drink.

(b) He was surrounded by his enemies, and he decided to lay his case before the Emperor, at Agra, and soon after he set out for the capital, leaving his followers to look after his things at Surat.

(c) There are many pleasant gardens, which attract many people to pass their time there ; and on the trees there are an infinite number of great birds, hanging on the boughs, making a shrill noise.

(d) Near that town lies a small village, on the river bank, where stands a splendid temple of the goddess Parvati much resorted to by pilgrims from different quarters of Bharatbarsha.

(e) Vijaya Sena, who was invited by the Emperor to Labhapura, (modern Lahore), received from him great honours, and also an order forbidding the slaughter of cows in the country ruled over by him.

(f) On the north side of the Himalayas there is a big lake, abounding in water-lilies called Himasaras ; and on its bank lived

a Daitya, named Saktiman who, by his invincible prowess, defeated all the gods in the heaven.

SANSKRIT—PASS

Third Paper

GROUP A

Translate two of the following passages into English :—

(a) ততো ষারপালঃ প্রাহ,—“দেব ! শ্রীশৈলাদাগতঃ কশিত্ বিঘ্নান্ ব্রহ্মচর্য্যনিষ্ঠো ষ্মারি বৰ্ভত” ইতি । রাজা “প্রবেশয়” ইতাহ । তত্ আগত্য ব্রহ্মচারী “চিরং জীব” ইতি বধতি । রাজা পৃচ্ছতি “ব্রহ্মন্ ! বাল্য এব কলিকালানুরূপং কিং নাম ব্রতং তে ? অবহং উপবাসেন কৃশোহস্মি, কন্তুচিৎ ব্রাহ্মণস্ত কন্তাং ভূতাং দাপয়িষ্যামি, ত্বঞ্চেদ গৃহস্ত-ধৰ্ম্মসঙ্গো কুরিষ্যসি” ইতি । ব্রহ্মচারী প্রাহ,—“দেব ! ত্বমীধরস্তুরা কিমসাধ্যম্ ?

সারঙ্গাঃ হৃঙ্গলো গৃহং গিরিগুহা শাস্তি প্রিয়া গেহিনী,

কীৰ্ত্তিবৃন্তলতাকলৈর্নিবসনং শ্রেষ্ঠং তরুণাং ষচঃ ।

তচ্ছান্নামৃতপুৰমগ্রমনসাং বেষামিরং নিবৃতি-

স্তেষামিন্দুকলাবতঃস—যমিনাং যোকেহপি নো ন স্পৃহা ॥”

(b) এতদ্ রাজবচনং শ্রুত্বা তেন উক্তং—ভো ! মহাসত্ত্ব ! কিং কাৰ্য্যং কথয় । রাজোক্তম্ অস্মাত্ স্থানাং দ্বাদশ যোজন পৰ্য্যন্ত যদি গম্যতে তর্হি তত্র মহারণ্যমধ্যে বিবস কশ্চিত্ পৰ্বতোহস্তি, বিকালনাথো নাম যোগীশ্বরো বিত্ততে চ । যদি তন্ত দর্শনং ক্রিয়তে তর্হি স সৰ্বং বাঞ্ছিতমর্থং দাস্তাত ! অহং তত্র গচ্ছামি । তৈরুক্তং বয়মপি গমিষ্যামঃ । রাজোক্তং শ্রুত্বেন আগচ্ছ । ততস্তে রাজা সহ নির্গতা মহারণ্যমার্গমভিবিসমং দৃষ্ট্বা রাজানং প্রোচুঃ ভো মহাসত্ত্ব ! কিয়দূরে শৰ্কভোহস্তি ? রাজোক্তং ইত অষ্টযোজনাৎ বিত্ততে । তর্হি বয়ং গমিষ্যামঃ যতপি কিয়দূরে-হস্তি মার্গেহপ্যভিবিসমঃ ইতি ক্রবস্তুঃ ষট্‌যোজনানি গত্বা পূর্বতে যাবদ্ গচ্ছন্তি, তাবদ্ মহাকালবদনঃ বিবায়িমদ্ববম্ অভিভয়ঙ্করঃ কশিচ্ সর্পঃ মাগমাবৃত্য তিষ্ঠতি ॥

(c) “অপি সত্যমেতদেব মুখ্য প্রয়োজনং তত্র তব গমনং ? ইতি তথা ভূয়োহপি হেমিনা প্রত্যবোচৎ । “অথ, ইদানীং পারিষনগরমধিবসতা পুণ্ড্রনয়ন মম স্বামিনা আকৃষ্টজদয়া তদ্বিরহ-বেদনাং সোঢ়ুমক্ষমা তৎকরকমলগ্রহণমুখ্য ব্যাপ্ত্যর্থমেব হুঃসাধ্যমপীদৃশমুপায়ং কর্তৃমুদ্যতশ্চামি । অত্থবা পারিষপুৰ্যাঃ, প্রাণ্ডুমহাৰাজস্ত ঔষধপ্রয়োগসা বা চিন্তা স্বপ্নেহপি ন মে মনসি প্রোচুঃ স্যাৎ । ইতি স্বমনোগত সৰ্বং যথাবৎ প্রকাশয়ন্ত্যাং হেমিষ্ঠাং অযুদারপ্রকৃতি প্রকৃত্যা তস্যামতীব বৎসলা সঃ

প্রভুতেনী তস্যান্ত্রগমনবিষয়ে স্বীয়াং সংমতিমসংমতিং বা যা অদর্শনস্তী কেবলমূরোকৃতোদাসীন-
তাবা তামেব মন্বন্তু ।

GROUP B

2. (a) Form *sandhi* in any three of the following :—

বিকো-উক্তকঃ । হরী-এতো । বাক্-হরিঃ । সন্-অচ্যুতঃ and ধাতঃ-গচ্ছ ।

(b) Decline any *three* of the following :—(i) যি in all cases ; (ii) গে in the second and sixth case endings, (iii) ত্রী in the fourth and fifth case-endings ; (iv) হৃষী in the nominative and vocative cases, and (v) বিঘ্ণ in the third and seventh case-endings.

(c) Give the feminine forms of *two* of the following :—
মৎস্য, বৃহু স্বকেশ ।

3. (a) Form compounds out of the following :—

অক্ষঃ পরম্ । প্রাপ্তো জীবিকাং যেন সঃ । মূৰ্খঃ ভাতা যস্য সঃ । মিত্রশ্চ বরূপশ্চ ।

(b) Give তদ্ধিতান্তু words for *three* of the following :—দ্বারে নিযুক্তঃ, আশ্বনে হিতম্ । জনানাং সমূহঃ । ঈষদুনো বিধান্ ।

(c) Conjugate *three* of the following :—কৃ in লট্, হৃ in লোট্, অস্ in লঙ্ and শ্ব in বিধিলিঙ্ ।

(d) Frame sentences to illustrate the uses of পরিভঃ, স্বত্তি, অলম্ ।

4. (a) Change the voice in :—

স বার্তাঃ প্রপ্রচ্ছ ।

(b) Give the causative form of পা or হৃ, the desiderative form of দা ।

(c) Correct or justify *two* of the following :—

(i) কৃষ্ণিকয়া ভাপয়তে বালক রামঃ ।

(ii) হরহরম্পতিষ্ঠতি মন্ড্রে ব্রাহ্মণঃ ।

(iii) রমণীয়োহন্নং প্রোতঃ ।

GROUP C

5. Answer any *three* of the following :—

(a) Discuss the antiquity of the Ramayana or of the Mahabharata.

(b) Give a short account of Sanskrit lyrical poetry or didactic literature.

(c) Describe briefly the influence which Sanskrit literature has exercised upon the nations of the west.

(d) Write short notes on *five* of the following :—

Badarayana, Bhattoji, Rajasekhara, Varahamihira, Krishna Misra, Bhatta Narayana, Sri Harsha, Asvaghosa and Kalhana.

1921 SANSKRIT—PASS

First Paper

1. Translate into English any *one* of the following stanzas :—

(a) যোহসাবতীন্দ্রিয়গ্রাহঃ শৃঙ্গোহিব্যক্ত সনাতনঃ ।

সর্বভূতময়োহচিন্ত্যঃ স এব স্বয়মুদ্ভবো ॥

(b) তমোহয়ন্ত সমাশ্রিত্য চিরং তিষ্ঠতি সেন্দ্রিয়ঃ ।

ন চ স্বং ক্লেশতে কৰ্ম তদোৎক্রামতিমুক্তিতঃ ॥

(c) ইন্দ্রিয়শাস্ত সৰ্বেষাং যত্নকং করতীন্দ্রিয়ম্ ।

তেনাস্য ক্ররতি প্রজ্ঞা দূতেঃ পাত্ৰাদিবোদকম্ ॥

(d) নাভিব্যাহারয়েষু ক স্বধানিনয়নাদূতে ।

শূদ্রেণ হি সমস্তাবিতাবধেদে ন জায়তে ॥

Derive the underlined word in the extract (d).

2. Give in your own words in English the substance of any *two* of the following stanzas :—

(a) প্রাক্কুলান্ পৰ্য্যাপাসীনঃ পবিত্রৈশ্চৈব পাবিতঃ ।

প্রাণায়ামেন্দ্রিভিঃ পূতন্তত ওঙ্কারমহতি ॥

(b) ন তেন বুদ্ধো ভবতি যেনাস্ত পলিতং শিরঃ ।

যো বৈ যুগাপাধীমানস্তং দেবাঃ স্ববিরং বিদ্বঃ ॥

(c) যোহবীতেহহং হস্তেতাং জীপি বর্ষাপ্যতন্ত্রিতঃ !

স ব্রহ্ম পরমভ্যতি বায়ুভূতঃ স্বমুর্ত্তিমান্ ॥

(d) তমিন্ ষপতি তু বহু কৰ্ম্মাঙ্গানঃ শরীরিণঃ ।

ষকৰ্ম্মভ্যো নিবৰ্ত্তন্তে মনশ্চ মানিমূচ্ছতি ।

3. State briefly in English the rules of conduct which a *Brahma-charin* must observe while staying with his preceptor or *Guru*.

4. Explain in Sanskrit after the manner of Kulluka any one of the following stanzas :—

(a) আসীদিদং তমোভূতমপ্রজাতমলক্ষণম্ ।

অপ্রতর্ক্যমবিজ্ঞেয়ং গ্রন্থপ্তমিব সৰ্ব্বতঃ ।

(b) বেদঃ স্মৃতিঃ সদাচারঃ ষষ্ঠ চ ত্রয়মাঙ্গনঃ ।

এতচ্চতুর্বিধং গ্রাহঃ সাক্ষাৎস্বত্ব লক্ষণম্ ।

5. Translate into English any one of the following stanzas :—

(a) স তপ্তকর্ত্ত্বশ্বরভাষরাধরঃ

কঠোরতারাধিপলাহ্ননহবিঃ ।

বিদিত্ব্যভ্যে বাডবজাতবেদসঃ

শিখাভিবান্ধিষ্ট ইবান্ধসাং নিধি ।

(b) নীতিরাপদিষদগম্যঃ পরন্তুমানিনী হ্রিয়ে ।

বিধৃটিংধৃক্তদন্তেব পূর্ণন্ততোৎসবায় সঃ ।

(c) শ্মরত্যাদো দাশরথির্ভবন্ ভবা-

নম্ বনাস্তাছনিতাপহারিণম্ ।

পরোধিমাবক্ষ্যসলজ্জলাবিলং

বিলজ্য লঙ্ঘ্যং নিকষা হনিত্বতি ।

(ii) In the extract (a) expound the *samasa* in the first foot, *charana*, and give the *lun* or aorist form of the underlined verb.

(ii) In the extract (b) derive and parse the underlined word in the first line, and derive the underlined word in the second line.

(iii) In the extract (c) parse the underlined word, and account for the future tense in the predicate in the fourth foot or *charana*.

6. (a) সটাক্ষটাভিন্নধনে বিজ্ঞতা

নৃসিংহ সৈংহীমতস্তুং তস্তুং স্বয়া ।

স মুখকান্তান্তনসঙ্গতস্তুরৈ-

ররীবিদারং প্রতিচক্রে নগৈঃ ।

(b) মাজীবন্ যঃ পরাবজ্রাহুঃখদকৌহপি জীবতি ।

তত্তাজননিরেবাস্ত জননীক্লেশকারিণঃ ।

(c) যুগান্তকালপ্রতিসংক্ৰান্তানো

জগন্তি যন্তাং সবিকাশমাসত ।

তনী মমুত্তর মধুকৈটভবিব—

স্তপোধনাভ্যাগমসম্ভবা যুদঃ ।

(d) হানে সমবতাং শক্যা বায়ামে বৃদ্ধিরজিনান্ ।

অবথাবলমারম্ভো নিদানং ক্রয়সম্পদঃ ॥

(i) Explain in English any *one* of the above stanzas.

(ii) In the extract (a) expound the underlined word in the first line ; derive adding notes, the underlined words in the fourth line.

(iii) Derive the underlined words in the extract (d) adding notes

(iv) Expound the underlined words in the extract (a) and (c).

7. (a) Explain in Sanskrit any *one* of the following extracts :—

(i) জগত্যাগ্যাপ্তসহস্রভামুনা

ন যন্নিবন্তঃ সমভাবি ভামুনা ।

প্রসস্ত তেজোভিরসংখ্যাতাং তৈ-

রদম্বরা মুন্নমমুত্তমং তমঃ ॥

(ii) বুদ্ধিশত্রুঃ প্রকৃত্যকৌ ঘনসংবৃতিকঙ্করঃ ।

চারেক্ষণো দূতমুখঃ পুরুষঃ কোহপি পার্শ্বিণঃ ॥

(iii) সহজচাপলদোষসমুজ্জত—

চলিতদুর্বলপক্ষপরিগ্রহঃ ।

তব দুর্দাসদবীৰ্য্যবিভাবসৌ

শলভতাং লভতামমুহুদগণঃ ॥

(b) It is held that there is an anachronism in the following extract
What is your opinion ? Give reasons for your answer :—

যে চাছে কালয়বনশাখরুদ্রিমাধরঃ ।

তমঃবভাবান্তৈহপোনং প্রদোষমমুদায়িনঃ ॥

8. Translate into Sanskrit any *three* of the following extracts :—

(a) Thee haughty tyrants ne'er shall tame :

All their attempts to hurl thee down

- Will but arouse thy gen'rous flame,
And work their woe, but thy renown.
- (b) Then from the dawn it seemed there came but faint
As from beyond the limit of the world,
Like the last echo born of a great cry,
Sounds, as if some fair city were one voice
Around a king returning from his wars.
- (c) Thine, too, these golden keys, immortal boy !
This can unlock the gates of joy ;
Of horror that, and thrilling fears.
Or ope the sacred source of sympathetic tears.
- (d) The boast of heraldry, the pomp of power,
And all that beauty, all that wealth e'er gave
Awaits alike the inevitable hour—
The paths of glory lead but to the grave.
- (e) Thy form benign, O goddess, wear,
Thy milder influence impart !
Thy philosophic train be there
To soften, not to wound my heart.
- (f) My boast is not that I deduce my birth
From lines enthroned and rules of the earth ;
But higher far my proud pretensions rise—
The son of parents passed into the skies.

SANSKRIT—PASS

Second Paper

1. Give in your own words in English a summary of the plot—
either of the seventh act of the *Abhayan Sakuntalam* or of the third
act of the *Ratnavali*.

2. Describe in your own words in English the incidents which led
to the discovery and the final rescue of সাগরিকা from her place of confine-
ment, and show how these incidents bring into strong relief the finest
trait of বাসবদত্তা's character.

3. Translate into English one of the following stanzas—

(a) কঠে কৃতাবশেষং কনকময়মথঃ শৃঙ্গলাদামাকর্ষন্

ক্রান্তা স্বারাণি হেলাচলচরণরণং কিঙ্কিনীচক্রবালঃ ।

দত্তানকোহঙ্গনানামমুহুতসরণিঃ সঙ্গবাদধপালৈঃ

একটোইয়ং ধবংসঃ এবিশতি নৃপতেম্মিরং ভদ্মুরায়াঃ ॥

(b) তীত্রাযাতপ্রতিহতভঙ্গকলনৈকদন্তঃ

পাদাকুট্টরতভিলয়াসঙ্গসঙ্ঘাতপাশঃ ।

মূৰ্ত্তো বিয়ন্তপস ইব নো ভিন্নসারঙ্গযুথো

ধর্ম্মারণ্য এবিশতি গজঃ স্তম্ভনালোকভীতঃ ॥

(c) Give the different meanings of the words বলয় and আলোক ।

4. Give the substance in English *either* of the following groups. but not both.

GROUP A

(a) চিত্রে নিবেশ্য পরিকল্পিতসঙ্ঘযোগা-

রূপোচ্চয়েন মনসা বিধিনা কৃত্য নু ।

দ্রীরঙ্গমষ্টিরপরা প্রতিভাতি সা মে

ধাতুর্বিভূতমমুচিস্ত্য বপুশ্চ তস্তাঃ ॥

(b) দিশঃ পৃথুতরীকৃত্য জিততিজাষু পত্রদ্বিব-

শ্চতুর্ভিরপি সাধু সাধয়তি হুথৈঃ স্বয়ং ব্যাহতম্ ।

শিরাংসি চলিতানি বিন্ময়বশাদ্ ধ্রুং বেষসা

বিধায় ললনাং জগদ্রম্যললামভূতামিমাং ॥

GROUP B

(c) বিবৃক্তিং কম্পস্ত প্রথয়তিতরাং সাধমবশা-

দবিস্পষ্টাং দৃষ্টি তিরয়তি পুনর্ধাম্পসলিলৈঃ ।

খলমর্গাং বাণীং জগয়তিতরাং গঙ্গাদয়তা

জরায়াং সাহায্যং মম হি পরিতোষোহু কুরুতে ॥

(d) আচার ইত্যধিকৃতেন ময়া গৃহীতা

বা বৈত্রবষ্টিরবরোধগৃহেবু রাজ্যঃ ।

কালে গতে বহুতিথে মম সৈব জাতা

প্রস্থানবিক্রমগতেরবলম্বনার্থা ॥

5. *Either*, Prove both from the অভিজ্ঞানশকুন্তলম্ and the যন্ত্রাবলী that

Painting was an art which was cultivated by the Hindu ladies in the age of the authors, and that *writing* was also practised by them.

Or, Mention *either* some of the beneficial effects of chase ঝগরা as given in the অভিধানশকুন্তল; or some of the virtues of medicinal herbs, talisman, and incantations (মণিমন্ত্রৌষধি) as given in the রত্নাবলী ।

6. Render into prose the following stanzas, using words other than those in the text as far as possible :—

(a) শিলাকুলিবিনিবেশে রেখাপ্রান্তেবু দৃগুতে মলিনঃ ।

অশ্রু চ কপোলপতিতং দৃশ্যমিদং বর্জিকোচ্ছ্বাসাং ॥

(b) মাতি পতিতো তিখন্ত্যাস্ত স্তা বাপ্পাশ্বীকরকণৌ ।

খেদোদগম ইব করতলস্পর্শাদেব মে বপুষি ॥

7. Explain clearly in English or in your own vernacular the beauty of the sentiments expressed in *either* of the following :—

(a) আলক্ষ্যদন্তমুকুলানিমিত্তহাসৈ-

রব্যাক্তবর্ণরমণীরবচঃ প্রবৃত্তীন্ ।

অক্সায়প্রণয়িনন্তনয়ান্ বহন্তী

ধন্তান্তদঙ্গরজসা মলিনী ভবন্তি ॥

(b) যান্তত্যন্ত শকুন্তলেতি হৃদয়ং সংস্পৃষ্টমুৎকর্ষয়া

কর্ষঃ স্তম্ভিতবাপ্পবৃষ্টিঃ কল্মষচিন্তাজড়ং দর্শনম্ ।

বৈক্লব্যং মম ভাবদীদৃশমহো হ্রেহাদরশ্যোকসঃ

পীডান্তে গৃহিনঃ কথং ন তনয়াবিলেবহুঃপৈন বৈঃ ॥

8. Translate into Sanskrit *two* of the following :—

(a) There is nothing of the supernatural about this drama. It may be called a comedy in which the characters are all mortal men and women, and the incidents quite domestic. It presents us with a valuable picture of Hindu manners in mediaeval times. The poet seems to have no scruple in borrowing ideas and expressions from Kalidas.

(b) A wife must share her husband's fate. My duty is to follow thee, wherever thou goest. Apart from thee I would not dwell in heaven itself. Close as thy shadow would I cleave to thee in this life and hereafter. It is my fixed resolve to follow thee.

- (c) 'Depend not on another rather lean
Upon thyself ; trust to thine own exertions.
Subjection to another's will gives pain ;
True happiness consists in self-reliance.

SANSKRIT—PASS

Third Paper

1. (a) Translate any two of the following passages into English :—

(a) অথ মণ্ডুকবধে যোরে ক্রিয়মাণে দিঙ্গু সৰ্বাস্থ মণ্ডুকান ভয়মাবিবেশ । তে ভীতী
মণ্ডুকরাজায় বথাবুস্তং স্তবেদয়ন্ । ততো মণ্ডুকরাট্ তাপসবেশধারী রাজানমভাগচ্ছৎ, উপেতা
চৈনমুবাচ মা রাজন্ ক্রোধবশং গমঃ । প্রসাদং কুরু । নাইসি মণ্ডুকানামনপরাধানাং বধং
কৰ্ত্তুমিতি । তমেবং বাদিনম্ ইষ্টজনশোকপরীতান্না রাজোবাচ ন হি ক্ষম্যতে তন্ময়া ।
হনিচ্ছাম্যেতান্ । এতৈর্হি দুঃসান্নাভিঃ প্রিয়া মে ভক্ষিতা । সৰ্বথৈব মে বধ্যাঃ মণ্ডুকাঃ ।
নাইসি বিঘ্নন্ । মামুপরোদ্ধুমিতি ॥

(b) ততো রাজকুমারো বনং গচ্ছা বহুন্ দ্বাপদান্ ব্যাপাণ্ড কৃক্সারং দৃষ্ট্ৱা তদমুগতো
মহদরণ্যং প্রবিষ্টো যাবৎ পশ্চতি, তাবৎ সৰ্কোহপি সৈন্তগৰ্ভঃ নগরমার্গে গতঃ । কৃক্সারোহপি
তসাদৃশ্তো জাতঃ স্বয়মেকাকী তুরগারুঢ়ং সরোবরস্ত অগ্রে বনমপশ্চৎ । সোহবাদবতীর্ণো
বৃক্ষশাখায়মবঃ নিবধ্য জলপানং বিধায় যাবদ্ বৃক্ষাধঃ ছায়ায়ামুপবিশতি, তাবদতিভয়ঙ্করঃ কশিদ্
ব্যাত্তঃ সমাগতঃ । তং ব্যাত্তং দৃষ্ট্ৱাশ্ববন্ধনং ত্রোটয়িত্বা পলায়মানো নগরমার্গমগমৎ । রাজকুমা-
রোহপি ভয়াদ্ বেগমানঃ শাখামবলম্ব্য বৃক্ষমারুঢ়ঃ পূৰ্ব্বাক্রুঢ়ং ভল্লং কং দৃষ্ট্ৱা পুনরত্যস্তং
ভয়ং প্রাপ্তঃ ।

(c) অথ তেন ভল্লুকেন ভণিতম্, ভো রাজকুমার । স্বং মা ভৈবীঃ, অথ মম শরণাগতস্তং,
অতএবাহং কিমপ্যনিষ্টং ন করিষ্যামি । মাং বিধস্ত ব্যাত্তাদপি ন ভেতব্যং । রাজকুমারেণ
ভণিতম্, ভো ঋক্ষরাজ । তব শরণাগতঃ, বিশেষতো ভয়ভীতঃ, অতো মহৎ পুণ্যং শরণাগতরক্ষণং
ভবতি । তদা ভল্লুকেন সমাধাষিতো রাজপুত্রঃ । ব্যাত্তোহপি বৃক্ষাধঃ সমায়াতঃ । ততঃ
সূৰ্য্যোহপ্যন্তং গতঃ । রাজাবতিশ্রান্তং রাজপুত্রং যাবৎ নিত্রা সমায়াতা, তদা ভল্লুকেনোক্তম্,
বৃক্ষোপঃপতিতোহসি, এহি মমাক্ষে নিত্রাং কুরু এবমুক্তস্য ভল্লকভাক্ষে নিত্রাং গতো রাজপুত্রঃ ।

2. (a) Frame sandhis in any three of the following :—

উপ-এহি, সন্-শব্দ, কুৰ্ব্বৎ-অপি, হরিঃ-রম্যা, and গতো-ইমো ।

(b) Decline any *four* of the following :—*मास* in the locative case, *दिव्* in the accusative case, *अव्यक्* in the nominative case, *अहि* in the locative case, *वृ* in the genitive case, *इह* (feminine) in the instrumental case.

(c) Conjugate any *four* of the following :—*वक्* in *लोट्* second person, *शी* in *लट्* third person, *अद्* in *लिट्* first person, *जि* in *लिट्* first person, and *त्र* in *लुङ्* second person.

(d) Give the feminine forms of any *four* of the following :—

अव, *सेवक*, *अग्नि*, *सधि* and *ब्रह्* ।

3. (a) Derive any *four* of the following :—

काम, *क्षेत्र*, *विषम्*, *रजक*, *जङ्ग* and *आसीन* ।

(b) Substitute single words for *three* of the following :—

जेतुमिच्छति ; *ग्रहितुमिच्छति* ; *पुनः पुनः नृत्यति* ; *आन्ननः पूजयिच्छति* ; and *कृक* *इव* *आचरति* ।

4. Correct or justify any *three* of the following :—

(a) *स तं आह्वयति* ।

(b) *राजा शत्रुम् विजयति* ।

(c) *सुगन्धं पुष्पं चिनोति* ।

(d) *ग्रामे अधिवसन् स मां क्रुहति* ।

5. Explain the *samasas* in any *three* of the following :—

समकम्, *अग्नीयारकतो*, *सप्तर्षयः*, *सुराजा* and *व्रातामूलिपुः* ।

6. Write notes on any *three* of the following :—*Dignaga*, *Shriharsha* *Bhababhuti*, *Madhavacharyya*, *Asvaghosha*, and *Kumarila*.

7. Write what you know of *four* of the following works :—*Chaurapanchasika*, *Gitagovinda*, *Mricchakatika*, *Panchatantra*, *Probo-*
dhachandrodaya, and *Kathasaritsagar*.

8. *Either*, Explain the plot of the *Ramayana*, and discuss the date of its composition.

Or, Give a brief account of the six systems of Hindu philosophy.

1922

SANSKRIT—PASS

First Paper

1. Quote or refer *either* to the stanzas on the *Manusamhita* which prescribe the respective duties of a *Brahmin* and a *Kshatriya* ; or to those which contain the importance attached by *Manu* to the cultivation of the moral virtues and to learning.

2. Translate into English *two* only of the following stanzas :—

- (a) অধ্যয়মাণস্তাচাত্তো বখাশাস্ত্রমুদগ্ধঃ ।
ব্রহ্মাঙ্গুলিকৃতোহধ্যাপ্যো লঘুবাশা জিতেশ্রিয়ঃ ।
- (b) বেদান্ত্যাগাশ্চ যজ্ঞাশ্চ নিয়মাশ্চ তপাঃসি চ ।
ন বিশ্রুত্বৈভাবস্য সিদ্ধিং গচ্ছন্তি কহিচিং ॥
- (c) চক্রিণো দশনহীনস্য রোগিনঃ ভারিণঃ স্ত্রিয়াঃ ।
স্নাতকস্য চ চাক্ষুশ্চ পস্থা দেয়া বরস্য চ ॥

3. In the following extracts give formation of the terms underlined in (a) and explain the sense of any *three* of the words contained in (b).

- (a) ত্রিপদা চৈব গায়ত্রী । ত্রিবর্ষ ইতি তু স্থিতিঃ । সাগ্নিত্রেতা গরীয়সী ।
- (b) একান্বাদী । অনুচানঃ । আলোক্যাঃ । পারজ্যাঃ । স্নাতকঃ ।

4. Give in English the substance of *one* only of the following stanzas—

- (a) বিবাদপ্যমৃতং গ্রাহং বালাদপি স্তম্ভামিতম্ ।
অমিত্রাদপি সমুত্তমমেখাদপি কাঞ্চনম্ ।
- (b) বুদ্ধিমৎস্ব নরাঃ শ্রেষ্ঠা নরেষু ব্রাহ্মণা স্তূতাঃ ।
ব্রাহ্মণেষু চ বিদ্বাংসো বিদ্বৎস্ব কৃতবুদ্ধয়ঃ ।
কৃতবুদ্ধিষু কর্তারঃ কৰ্ত্তৃষু ব্রহ্মবাদিনঃ ।
- (c) তেবাং ভবয়বান্ মুক্খান্ বরামপ্যমিতৌজসাম্ ।
সগ্নিবেজ্ঞানমাত্মাহ সৰ্ব্বভূতানি নির্বমে ॥

(i) What does the word তেবাং in extracts (c) refer to ?

(ii) Explain the word *मात्रा* in the same extract.

5. Classify the organs of sense and give their number as stated in the *Manu-samhita*.

Or, Distinguish between *पाकवज्र*, and *विधिवज्र*, *उपाध्याय* and *आचार्य* ।

6. Translate into English *either* of the following groups, but not both—

Group A

(a) অথোপপত্তিঃ ছলনাপরোহপরা-

নবাত্য শৈল য ইবৈব ভূমিকাম্ ।

তিরোহিতান্না শিশুপালসংজ্ঞয়া

প্রতীয়তে সস্ততিসোহপ্যসঃ পথৈঃ ।

(b) তীক্ষ্ণা নাকুন্তদা বুদ্ধি কৰ্ম্ম শাস্ত্রং প্রতাপবৎ ।

নোপতাপি মনং সোম্য বাগেকা বাগ্মিনঃ সত্যঃ ॥

Group B

(a) স সঞ্চরিত ভূবনস্তরেবু বাৎ

যদুচ্ছ্রাহশিপ্রদাশ্রয়ঃ প্রিয়ঃ ।

অকারি তন্ত্রে যুকটোপলম্বলৎ

করৈস্তিসক্যং ত্রিদশৈর্দিশৈঃ নমঃ ॥

(b) তুঙ্গত্মিতরান্যত্রৌ নেদং সিদ্ধাবগাধতা ।

অলজ্জনীয়তাহেতুজ্ঞানং ভগ্ননখিনি ॥

(i) In extract (b) under Group A, derive *অরুন্তদা* ।

(ii) In extract (a) under Group B, notice the peculiarities in the compound *ত্রিসক্যং*, and derive the word *ত্রিদশৈঃ* ।

7. Give in English or in your own vernacular the substance or the central idea of *one* only of the following extracts—

(a) আরভস্তেহন্নমেবাজাঃ কানং ব্যগ্রা ভবন্তি চ ।

মদারভাঃ কৃতধিরতিষ্ঠতি চ নিরাকুলাঃ ॥

(b) উপায়মাহিতস্যপি নশ্চক্ষ্যৰ্থাঃ প্রমত্ততঃ ।

ইতি নোপত্ত্বোহপি শরাস্থং গয়ুগাম্ ॥

(c) তৃপ্তিবোগঃ পরোপাশি মহিমা ন মহীমসাম্ ।

পূর্ণশ্রোত্রাদয়কাকী দৃষ্টোন্তোহত্র মহার্ঘবঃ ॥

8. Translate into Sanskrit any *two* of the following extracts—

(a) The man is surrounded by enemies from around and behind him. Petty accident destroys life and happiness. A moment annihilates the most toilsome work.

(b) The aim of religion is not perfecting a man in a natural sense, but to bring about a union of human and Divine nature.

(c) Wave on warrant for stating that God does not exist because he does not lend Himself to be verified by the senses. He is something which does not exist in space, as a horse or a tree.

SANSKRIT—PASS

Second Paper

1. Translate into English any *two* of the following *śloka*s :—

(a) তীত্রাযাতপ্রতিহততরুঃ স্বক্ষলয়ৈকদন্তঃ

পাদাকুট্টরততিবলয়াসঙ্গসঞ্জাতপাশঃ ।

মূৰ্ত্তো বিদ্বস্তপস ইব নো ভিন্নসারঙ্গবৃথো

ধৰ্ম্মারণ্যং প্রবিশতি গজঃ স্তম্ভনালোকভীতঃ ॥

(b) ক্ষৌমং কেনচিদ্ভিল্পপাত্তরুণা মাঙ্গল্যমাবিকৃতং

নিষ্ঠ্যুতশ্চরণোপরাগহুভগো লাক্ষারসঃ কেনচিত্

অস্ত্রোভো বনদেবতাকরতলৈরাপৰ্বভাগোথিতৈ-

দন্তান্তাভরণানি তংকিসলয়োত্তেদপ্রতিবিস্তিঃ ॥

(c) প্রাহর্দাদশধাহিতস্ত মুনয়ো যন্তেজসঃ কারণং

ভৰ্ত্তারং ভুবনপ্রসঙ্গ স্ববুবে যজ্ঞভাগেশ্বরম্ ।

যশ্চিন্নান্নভবঃ পরোহপি পুরুষশ্চক্রে ভবায়াম্পদং

ষণ্ণং দক্ষমরীচিসম্ভবমিদং তৎ শ্রষ্টুরেকান্তরম্ ॥

(d) অন্তাপান্তসমস্তাসি নভসঃ পারং প্রয়াতে রবা-

বাহ্বানীং সময়ে সমং নৃপজনঃ সাংযতনে সংপতন্ ।

সংপ্রভোঃ সরোরহদ্ব্যতিমুখঃ পাপাংস্তবসেবিভূঃ

প্রত্যত্ কৰ্ককৃতো দৃশামুদয়নন্তেনোরিবৌধীকতে ॥

2. (a) Indicate the context of *Sloka* (d)

(b) Write explanatory notes on the underlined portions in *Sloka* (c)

(c) Expound the *samasa* in সরোরহদ্ব্যতিমুখঃ and পাদাকুটব্রতভিবলয়াসঙ্গসঙ্লাতপাশঃ as used above.

(d) Derive মূর্ত, বিয়, নিষ্ঠ্যত and সাংযতন ।

(e) Change the voice of *Sloka* (b).

3. Explain fully, with reference to the context, in your own vernacular any three of the following extracts :—

(a) লক্ষ্যাকাশো মে মনোরথঃ । কিন্তু সখ্যা পরিহাসোদাক্ততাং বরপ্রার্থনাং ঞ্জহা
ধুতৈষেধীভাবকাতরং মে মনঃ ।

(b) শমপ্রধানেষু তপোধনেষু গৃচ্চ হি দাহান্নকমমন্তিতেজঃ ।

স্পর্শামুকুলা ইব সূর্য্যকান্তান্তদন্ততেজোহভিভবামমন্তি ।

(c) দিষ্টে ঠিরা ধূমড়লিদিষ্টে ঠিশো বি জজমানস্ম পাবএ এক আঃহই পড়িলা । বহু
অসিদ্ধপরিদিগা বিয় বিজ্ঞা অসৌরগণিগিজ্ঞাসংবৃত্তা ।

(d) ছরবগাহা গতির্দৈববত্ত । বাহনভঙ্গপতিতোথিতো নষেতাবেব নিদর্শনম্ ।

(e) মম কঠগতাঃ প্রাণাঃ পাশে কঠস্থিতে তব ।

অন্তঃ বার্ষপ্রযত্নোহয়ং ত্যজ্যতাং সাহসং প্রিয়ে ॥

4. Explain the following *Sloka* in simple English or vernacular sentences of your own :—

(a) বিরম বিরম বহু মূঞ্চ ধূমামুখকং

একটয়সি কিংমূচৈরজিবাং চক্রবালম্ ।

বিরহহতভুজাহং যো ন দক্ষঃ শ্রিয়য়াঃ

প্রলয়দহনভাসা তস্য কিং স্বং করোবি ॥

(b) निरुपमसि विमर्ग-प्रहितानाङ्गः

अनुरूपसि विवादं कल्पसे रक्तशाय ।

अतस्तु विभवेषु ज्ञातव्यः सप्त नाम

इति तु परिसमाप्तं बहुकृतां प्रज्ञानम् ॥

5. *Either, Give in English or in vernacular the substance of the last Act of the Ratnavali with special reference to the doing and character of Yangandharayana.*

Or, Give in English or in vernacular the substance of Durrava's curse, and state what bearing it has upon the main plot of the Abhignana Sakuntalam.

6. Translate into Sanskrit *either* of the following extracts :—

(a) Rudra is fierce and destructive like a terrible beast, and is called a bull. He is exalted, strongest of the strong, swift, unassailable and unsurpassed in might. He is young, and a lord and father of the world. He is bountiful and auspicious, but usually regarded as malevolent. He not only preserves us from calamity but bestows blessings as well.

(b) Meanwhile, the other lad equally reflected that the body had to be halved, and thought to himself, 'Suppose I poison the rice and give him it to eat and so kill him and have the whole of the treasure for myself.' Accordingly, when the rice was boiled, he first ate his own share and then put poison in the rest, which he carried back to the jungle.

SANSKRIT—PASS

Third Paper

1. Translate any *two* of the following passages into English :—

(a) चेदि किं भणसि, अपरिचितशरीर आर्यापुत्रे इव ? वरमदीर्घां शरीरेण परिचितो न पुनश्चरित्रेण । सांप्रतमञ्जयिष्ठं जन एवं मन्त्रयिष्यति, दरिद्रतया आर्यापुत्रेनैव ईदृशं कार्यमशुद्धितम् । भगवान् कृतास्त । पुत्रपदपतिजलविन्द्वञ्जलेः क्रीडसि दरिद्रपुत्रवशागधैर्यः इयं मे एका मातृगृहलका रत्नावली तिष्ठति एवमपि अतिगोपीरतया आर्यापुत्रो न गृहीयति ।

(b) अत्र नास्ति शोकमपि सुखं नृचकम् । यत्र अलीकं कथयिष्मि तत्र अपराधिनी उचिष्मि । स एव शिखो जनः यः पुष्टः पुत्रवमपि हितं भणति । हृषि । सर्वमेव ईदम् अनुभविष्येदन्म ।

তদ্ দেবতানাং প্রশাসনম্ ব্রহ্মল্যাবস্ত্যনাং পরিগ্রহেণ চ অন্তর্ধ্যতাম্ । ন খলু স্বপ্নে দংষ্ট্রিণো নকুলস্য বা দর্শনং প্রশংসন্তি বিচক্ষণাঃ ।

(c) অরে অয়মসৌ হুরভিশীতলবায়ুসংবাহিতঘনকিসলরো জগ্ৰোধপাদপঃ । উচিতা বিশ্রামভূমিরিয়ং সমরব্যাপারভিন্নস্য বীরজনস্য । অন্তঃস্থচায়ঃ চন্দনচ্ছটাশীতলেন অপ্রবন্ধহুরভিনা । সরসীসমীরণেনামনাগতক্লামী ভবিষ্যতি মহারাজঃ । কঃ কোহত্র ভো ! নুনং পরিজন হুয়াবিস্য বুকোদরস্য দর্শনাং ত্রাসেন শিথিরসম্মিবেশামেব প্রবিষ্টঃ ।

(d) শৃণোতু মহারাজ ! পুরা ভগবতা মহাসেনেন শাখতং কুমারব্রতং গৃহীত্বা অথ গন্ধমাদকচ্ছেদিত্যাসিতঃ কৃতা চ স্থিতি যা কিম ত্রী ইমং প্রদেশভাগমিচ্ছতি সা লয়াভাবে পরিণতরূপা ভবিষ্যতি, গোঁরীবরণরাগসম্ভবং মণিং বর্জয়িত্বা চ ন লতাভাবং মোক্ষতীতি । ততোহহং গুরুশাপসংস্কৃতদরীা বিশ্বতদেবতানিয়মা কুমারবনং প্রতিষ্ঠা লতাভাবেন পরিণতক মে রূপম্ ।

(e) অমাত্য ! অথ কিম্ । প্রাক্ চল্লগুপ্তপ্রবেশাং শয়নগৃহং প্রবিষ্টমাত্রেন নিপুণমবলোকয়তা দুরাঙ্কনা চাণকোন ভিত্তিচ্ছিত্রাদ্ গৃহীতান্নলপাং নিকামস্ত্রীং পিপীলকাপুরুষমবলোক পুরুষগর্ভমেতং গৃহমিতি বুদ্ধা দাহিতং তং শয়নগৃহম্ । তস্মিন্শ্চ দহমানেন ধূমাবরুদ্ধদুঃসোহন-ধিগম্য স্বারং সর্ব্বং এব অভ্যস্তরহা নষ্টা ।

2. (a) Form sandhi in any four of the following :—

হরে + এহি, কৃষ্ণ + স্বপ্নি, প্র + স্পৃচ্ছতি, শিব + ছায়া, and সঃ + অত্র ।

(b) Decline any four of the following :—গো in দ্বিতীয়া, বিষস্ in তৃতীয়া, বিশ্ in চতুর্থী, বৃদ্ধা in পঞ্চমী, সর্বা in ষষ্ঠী, and ন্ in সপ্তমী ।

(c) Conjugate any four of the following :—অস্ in বিধিলিঙ্, আস্ in লঙ্, হন্ in লোট্, জি in লিট্, বা in বিধিলিঙ্, and ক্রম্ in লুট্ (all in the third person).

(d) Give the feminine forms of any four of the following :—শিব, হিম, শস্ত্র, মনুষ্য and মনস্য ।

(e) Decline any four of the following :—

প্রিয়, প্রক্ল, মূর্ত্তি, শুক, পক and আদিত্য ।

(f) Substitute single words for any four of the following :—

হস্তমিচ্ছতি, পুনঃ পুনঃ ক্রামতি, ধূমমুচ্ছমতি, গুরুরিব আচরতি, সখা ইব আচরতি, and বৈরং করোতি ।

(g) Expound the *samasas* in any *two* of the following :—

রূপম্, বধার্ঘম্, দ্বাদশ অহোরাত্রঃ and স্তব্ধং ।

3. Correct or justify any *two* of the following :—

(a) মে প্রিয়সখা রাম ইদানীমত্রৈব বৰ্জতে ।

(b) বিপ্রো গৃহকাৰ্য্যাদ্ বিরমমাণঃ তপন্তপ্যতি ।

(c) কৃষ্ণো দ্বারকায়ামধিষ্ঠিতন্ নারদং সঙ্গগতে ।

(d) যো নিশ্চেষ্টো গৃহে অধ্যাস্তে স কিম হুখং সন্তিষ্ঠতি ?

(e) স কিমপি অজিজ্ঞাসং পরমুত্তরং ন অন্তঃপ্রবৎ ।

4. (a) Write notes on any *two* of the following :—Bhartrihari, Jayadeva, Kulluka Bhatta, Arya Bhatta and Jimutabahana.

(b) Write what you know of any *two* of the following words :—Mitaksara, Rajatarangini, Suryasidhanta, Sahityadarpana, and Mugdhabodha.

(c) *Either*, Describe briefly the influence of the Sankhya system on the religious and philosophic life of India.

Or, Give an account of the lyrical poetry in Sanskrit.

1923

SANSKRIT—PASS

First Paper

1. Translate into English *either* of the following groups of *Slokas* :—

GROUP A

(a) অগ্নিবায়ুরবিভ্যন্তঃ ত্রয়ং ব্রহ্ম সনাতনম্ ।

হৃদোহ যজ্ঞসিদ্ধার্থসুগ্ধজুঃ সামলক্ষণম্ ॥

(b) আক্লোষয় পরজ্যানির্দয়ং নীতিরিতীয়তী ।

তদুরীকৃত্য কৃতিভির্বাচস্যাতং প্রভায়তে ॥

(c) চরদ্বিষামিত্যবধারিতং পুরা

ততঃ শরীরীতি বিভাবিতাকৃতিম্ ।

রিভুর্বিভক্তাবয়বং পূমানিতি

ব্রহ্মাদয়ং নারদ ইত্যবোধি সঃ ।

GROUP B

- (a) চতুশাখং সকলো ধর্মঃ সত্যং চৈব কৃতে যুগে ।
নাথমণাগমঃ কশ্মিরমুখ্যা প্রতিবর্ততে ॥
- (b) ত্রিরতে বাবদেকোহপি রিপুস্তাবত কৃতঃ স্তবম্ ।
পুরঃ ক্লিষ্টাতি সোমং হি সৈংহিকেরোহম্বরক্রহাম্ ॥
- (c) পরস্য মর্দাবিধমুক্ততাং তিজং
দিহিতাদোষমজিহ্মগামিতিঃ
তমিক্কারাধরিভুং সর্গকৈঃ
কুলেন ভেজে কণিনাং ভুজঙ্গতা ॥

2. Comment grammatically on :—

উরীকৃত্য, বাচস্পত্যম্, and মর্দাবিধম্

- (b) Give the nominative singular forms of অম্বরক্রহাম্ and দিব্যাম্ ।
- (c) Derive ঈয়তৌ, জিহ্ম, বদ্ধ ।
- (d) Change the voice of *śloka* (b) in either of the groups above.
- (e) Expound the *samasas* in ঋগ্যজুসামলক্ষণম্ as used in *śloka* (a) in group A.

3. Explain fully in English :—

- (a) গ্রহীতুমার্বান্ পরিচর্য্যা মূহ-
মর্হাস্তুভাবা হি নিতান্তমর্থিনঃ ॥
- (b) বিরোধিশচসো মুকান্ বাগীশানপি কুব্ধতে ।
জড়ান্যামুলোমার্বান্ প্রবাচঃ কৃতিনাং গিরঃ ॥
- (c) নীলম্বতে দৈষ্টিকতা ন নিবীদতি পৌরুষে ।
শকার্থো সত্ কবিরিব দ্বয়ং বিদ্বানপেক্ষতে ॥

4. Give in English the sense of any two of the following *ślokas* :—

- (a) তেজস্বিমধ্যে তেজস্বী দবীরানপি গণ্যতে ।
পঞ্চমঃ পঞ্চতপসন্তপনো জাতবেদসাম্ ।
- (b) বৃদ্ধাত্ সহায়ঃ কার্ধ্যান্তং ক্ষৌদ্রীর্নানপি গচ্ছতি ।
সন্তরাত্তোষিমজ্জতি মহানত্যাং নগাপগা ॥

(c) বেদোহিণীলো ধর্মমূলং স্মৃতিশীলো চ তদ্বিদায ।

আচারশ্চৈব সাধুনামানন্দনস্তট্টরেব চ ॥

5. (a) Explain any *five* of the following terms :—

বনশ্রুতি, সমরাদ্ব্যাসিত, আৰ্য্যাবৰ্ত্ত, সদাচার, ভ্রাতা, ব্রাহ্মতীর্থ, ব্রহ্মাঙ্গলি ।

(b) Write notes on any *two* of the following :—

নামকরণ, অভিবাদান্, আচমত ।

6. Translate into Sanskrit any *two* of the extracts :—

(a) Whatever merit a man gains by reading the Vedas, by sacrificing, by charitable gifts, or by worshipping gurus and gods, the king obtained a sixth part of that in consequence of his duly protecting his kingdom.

(b) He who through arrogance makes false statements regarding the fearing of a caste-fellow, his country, his caste or the rites by which his country, his caste or the rites by which his body was sanctified shall be compelled to pay a fine of two hundred *panas*.

(c) All undertakings in this world depend both on the ordering of fate and on human exertion: but among these two the ways of fate are unfathomable; in the case of man's work action is possible.

SANSKRIT—PASS

Second Paper

1. Give in English, *either* a sketch of the magnificence of ascetic life as delineated in the *Sakuntala*.

Or, A brief estimate of the *Ratnavali* as a piece of literature and as a specimen of Sanskrit drama.

2. (a) Explain any *two* of the following passages in Sanskrit :—

(i) উদ্ধারিতকান্তিভিঃ কিসলয়েন্তাজাং ত্রিষং বিব্রতো

ভুঙ্গালীবিরুতৈঃ কলৈরবিশদবাহারলোলাজতা ।

ধ্বংস্তো মলয়ানিলাহিতচলৈঃ শাখাসমুৎসৈমুহ-

ত্রান্তিঃ প্রাপ্য মধুপ্রসঙ্গমধুনা মতা ইবামী ক্রমাঃ ॥

(ii) নষ্টং বর্ষবরৈর্মমুখ্যগণনাভাবাদপাস্য ত্রপা—

মন্তঃ কঙ্ককিকঙ্কস্য বিশতি আসাদয়ং বামনঃ ।

পর্যন্তাভ্রিভিনির্জস্য সপ্তশং নামঃ কিরাটেঃ কৃতম্
কুজা নীচতরৈব বাস্তি শনকৈরাঙ্কেশাশকিনঃ ॥

- (iii) অধ্বানং নৈকচক্রঃ প্রভবতি ভূবনভ্রাত্তীর্থং বিলজ্য
প্রাত প্রাপ্তুং রথো যে পুনরিত্তি মনসি শুভচিন্তাতিসারম্ ।
সংধ্যাকৃষ্টাবশিষ্টকরপরিকরৈঃ পগ্নিহেমারপতি
র্যাকুব্যাবহিতোহুত্কিত্তিত্তিনরতো বৈব দিক্ চক্রমর্কঃ ।

(b) Give the forms, in the first case ending plural, of the bases of the words underlined in (i).

(c) Give the forms, in লুঙ্ third person singular, of the roots of the words underlined in (ii).

(d) Expound the *samasa* in the words underlined in (ii).

3. (a) Explain any *two* of the following passages in English :—

(i) চিত্রে নিবেশ্য পরিকল্পিতসম্বোগা

রূপোক্তয়েন মনসা বিধিনা কৃতম্ ॥

স্ত্রীরস্বতীরপরাঃ প্রতিভাতি সা মে

ধাতুবিভূতমহচিন্তা বপুশ্চ তস্যাঃ ॥

(ii) রম্যাপি বীক্ষ্য মধুরাং নিশমা শব্দান্

পশু্যৎস্বকো ভবতি যৎ হৃথিতোহপি জন্তুঃ ।

ভক্তেতসা স্মরতি নুনমবোধপূর্বকং

ভাবহিরাপি জননাস্তরসৌহৃদানি ॥

(iii) মহাভাগঃ কামং নরপতিরভিন্নহিতরসো

ন কশ্চিৎপর্ণানামপকৃষ্টোহপি ভজতে ।

তথাপিদং শব্দং পরিচিতিবিবিক্তেন মনসা

জনাকীর্ণং মন্তে হতবহপরীতং গৃহ্মিব ॥

(b) Parse the words underlined in (i).

(c) Give the derivation of the words underlined in (ii).

(d) Change the voice of the Extract (iii).

4. Explain in reference to the context, *either* in Sanskrit or in English, the ideas contained in any *three* of the following passages :—

- (a) স্বীপাদন্ত্যাদপি জলনিধের্নিশোহপ্যন্তাৎ ।
 আনীয় খটিতি ঘটয়তি বিধিরভিমতমভিব্যুৎকৃতঃ ॥
- (b) হরযুভতিসম্ভবঃ কিল-মূনেরপত্যঃ তদ্ব্যবসিতাধিগতম্ ।
 অর্কস্যোপরি শিখিলং চ্যুতমিব নবমল্লিকাকুসুমম্ ॥
- (c) দর্শনস্বপ্নমুভবতঃ সাকাদিব ভগ্নয়েন হৃদয়েন ।
 স্মৃতিকারিণা ভয়া মে পুনরপি চিত্রীকৃতা কাস্তা ॥
- (d) উদেতি পূর্বে কুসুমং ততঃ ফলং
 যনোদয়ঃ প্রাক্ তদনন্তরং পরঃ ।

নিম্নলিখিতকবিত্বের ক্রম—

স্তব প্রসাদস্য পুরস্ত সম্পদঃ ॥

5. Translate the following passages into English :—

- (a) দিটিজা ধূমউলিদদিটিণো বি জয়মাগ্ন্য পায়এ আহবী পড়িলা । বছে, মুসিন্ধপরি-
 দিলা বিজ্জা বিয় অসো অণিজ্জা সংবুত্তা ।
- (b) এসো বিদধিত্তলংপট এদং পঞ্চরং উলধাডিয় ছুটবাণরো অদিকন্তো । এসা কথু
 মেহাবিণী উত্তীণা অন্ননো গচ্ছদি তা এহি লহং অণুসরেহইময় আলাবয়্য গহি দকবুরা
 কস্মবিবুরনো মন্তুইয়দি ।

6. Translate into Sanskrit any two of the following passages :—

(a) Treasure obtained by virtuous methods is continued to a man's posterity, but treasure of another kind is as easily melted away as a flake of snow when the rain begins to fall. Therefore a man should endeavour to obtain wealth by lawful methods but a king specially, since wealth is the root of the tree of empire. So honour all your ministers according to custom in order that you may obtain success and then accomplish the conquest of the regions, so as to gain opulence in addition to virtue.

(b) It is true, noble-hearted man: you have displayed your compassionate nature, but I cannot consent to save my body at the cost of yours; for who ought to save a common stone by the sacrifice of a gem? The world is full of people like myself who feel pity only for themselves, but people like you who are inclined to feel pity for the whole world, are few in number; besides, excellent man, I shall never find it in heart to defile the pure race of Sankhapala, as a spot defiles the disk of the moon.

(c) And when the day came to an end, the sun descended into the sea, and the sky was filled with stars, as if with spray, flung up by his fall, and the moon, having put on a white bark robe of moonlight, had gone to the ascetic grove on the top of the eastern mountain, as if desiring to withdraw from the world on account of the fall of the sun. We went to see the hermits, who had finished all their duties, and were sitting together in a certain part of the hermitage.

SANSKRIT—PASS

Third Paper

1. Translate any two of the following passages into English—

(a) নির্জগতয়া নীরবঃ কক্ষঃ। কাচিত্ পরিচারিকা সুরভিবারিনিবিন্ধবাজনকরা নীরবম্পবীজয়তি রাজপুত্রম্। অপরা কাচিদ ভাষাশক্তিশূন্থেব চিত্রপুঞ্জলিকা ইব তিষ্ঠন্তি কিমদন্তরে। যং হি দ্বিরদরদনির্মিতং পর্যাক্ষমখিশরানো রাজপুত্রস্তথ পাথে সমুপবিষ্ট কাচিদ রমণী সতর্ককরেণ তস্য শরীরক্ষতেষু কিমিব ভেষজং বিলম্পতি।

(b) কস্যাশ্চিৎ তরুণ্যঃ সৌন্দর্য্যঃ বাসন্তিমল্লিকায়। ইব নবক্ষুটং কোমলং পরিমলরয়ন্। কস্যাশ্চিদ রমণ্যঃ রূপং অপরাহুহলপদ্মসেব ভুবণোদুখং পরং প্রভাবিশিষ্টম্। কস্যাশ্চিত্ সৌন্দর্য্যং মবরবিকরপ্রকৃদায় জলনলিন্য। ইব হৃবিকাশং হৃবাসিতং ন সঙ্কুচিতং ন শুক্লং কোমলমথপ্রোজ্জলম্।

(c) সদসদ্বিচারবিধূরা দুক্কলোনাঃ প্রায়েণ নিরক্ষরতয়া বিভাসৌরভরহিতেন কুহুমমুহুম্বারেন বদনেন, স্রাংসলেদ বপুবা চ পরিশোভমানা নিয়তমসদাশ্রয়তামুপযান্তি দুর্বিনীততয়া বাক্কৈক্যৈরব দুর্ব্বটোভিরাশ্রয়িণাপি নিবুদন্তি; মদাক্তয়া চ মহতামপি ভীতিমুৎপাদয়ন্তি।

(d) স্বভাবকুপণোহি প্রায়েণ সর্ব্বথা সর্ব্বেভ্যঃ সারধনমুপাদায় স্বচ্ছন্দমায়ুসাত্ কুর্ব্বন্তি, কা কথা পরেবাম্; অপরে তাবত্ নিরীক্ষিতুমপি তন্ন শক্ণুবন্তি কিমুত প্রীহীতম্। তদেবম্ ন দেবায় ন ধর্ম্মায় ন আত্মনে উপযুক্তম্ তদ্ ধনং কেবলং পেটিকানিহিতং কৃদ্বা যত্নতঃ পরিপালয়ন্তি।

(e) পুরা গৌশকটিকা এব আসীদ অটনস্য সাধারণং সাধনম্। মন্ত্রে পুরাতনী প্রৈথৈবাত্র অধিকামুপযোগিতামুদ্বহতি। যতন্তুৎপ্রভ্রমণেন নয়নযোগনিবেশনাত প্রকৃতৈরুদাররমণীয়দৃশ্যেষপি নাখাদয়্যাসঃ স্তম্ভ্ সৌন্দর্য্যরসম্। ন চায়ং সৌন্দর্য্যবোধো মানবচরিত্র-গঠনে হীনহেতুতয়া বিরাজতে।

2. (a) Form *sandhi* in any two of the following :—

গৌঃ + অথঃ, বালকৌ + অমু, হরেঃ + এষঃ, তৎ + শ্লোকঃ, and তৎ + টীকা।

(b) Decline any *three* of the following :—

পিতৃ in প্রথম, মাতৃ in দ্বিতীয়, লম্বিন in তৃতীয়, ভগবৎ in চতুর্থী, হৃদী in পঞ্চমী, সখি in ষষ্ঠী, বারি in সপ্তমী ।

(c) Conjugate any *three* of the following :—

সদ in লট্, ভা in লিট্, দ্ব in লৃট্, ই in লোট্, বা in লঙ্, অ in বিধিলিঙ্ (all in the third person).

(d) Derive any *one* of the following :—

প্রেম, মূৰ্ছম, আৰ্ত্ত, ক্লান্তি, and ভাৰ্য্যা ।

(e) Substitute single words for any *two* of the following :—

পঠিতুমিচ্ছতি, পুনঃ পুনঃ নৃত্যতি, কলহং করোতি, আশ্বনঃ ছাত্রমিচ্ছতি, ছাত্র ইব আচরতি, ছাত্রমিব আচরতি and ছাত্রং করোতি ।

(f) Expound the *samasas* in any two of the following :—

উপনদি, অহিনকুলম্, পরোক্ষম্, অহর্দিবম্ and পুরুষসিংহঃ ।

3. Correct or justify any three of the following :—

(a) রামঃ প্রাতে জাগ্রতি, উখার কিঞ্চিদ্ ভুঞ্জতে চ ।

(b) অশ্বে, দেবদর্শনার্থং কেন পথেন গমিষ্যে ?

(c) সখে অনেন কর্মেণ ত্বং কিং লভিষ্যসি ?

(d) নোঃ প্রত্যক্ষঃ, অচিরশৈব এতেন সঞ্চরিষ্যসি !

(e) মে স্কন্ধরমেতম্ কার্যমিতি মন্তসে ভবান্ ?

4. (a) Write short notes on any one of the following :—Kanada, Ramanuja, Madhavacharya Bilhana, and Rajasekhara.

(b) Write what you know about any one of the following work :—Mahabhashya, Harivamsa, Kathasaritsagara, probodhchandrodaya.

(c) *Either* Describe briefly the influence of sanskrit literature on the west in the last century.

Or, Criticize the Renaissance theory of Prof. Max muller.

1924

SANSKRIT—PASS

First Paper

1. *Either*. Give a sketch of the process of the training of the Students as prescribed by Manu.

Or, Give a summary of the reasons advanced by Yudhisthira in his reply to Bhima.

2. Explain the idea contained in any *two* of the following passages :—

- (a) কৰ্ম্মপাং চ বিবেকার্থং ধৰ্ম্মাখমৌ ব্যবচরত্ ।
যশৈঃরয়োজয়চেমাঃ স্তম্ভহুংখাদিভিঃ প্রজাঃ ॥
- (b) মনস্তরাণ্যসংখ্যানি সর্গঃ সংহার এব চ ।
ঐড়ম্নিবেতত্ কুরুতে পরমেষ্ঠী পুনঃ পুনঃ ॥
- (c) অভিধানপূৰ্ব্বিকং সৃষ্টিং বদতো মনোঃ প্রকৃতিরবাচেতনাহমতঃ ।
পরিণমত ইত্যং পক্ষো ন সংমতঃ ।

3. Explain in Sanskrit any *one* of the following passages :—

- (a) তেবানিদং তু সপ্তানং পুরুষাণাং মহোজসাম্ ।
নুশ্নাতো মুৰ্ত্তিমাআভ্যঃ সংভবতাব্যায়াম্ ॥
- (b) বেদোহখিলো ধৰ্ম্মমূলং স্মৃতিশীলো চ তষিদাম্ ।
আচারশ্চৈব সাংখ্যনাস্তনস্তষ্টিরেব চ ॥
- (c) কুরন্তি সৰ্বা বৈদিকো জুহোতিবজতি-ক্রিয়াঃ ।
অকরং হুকরং জেয়ং ব্রহ্মচৈব প্রজাপতিঃ ।

4. Translate any *one* of the following passages into English :—

- (a) এবং স জাগ্রত্ স্বপ্নাভ্যামিদং সৰ্বং চরাচরম্ ।
সংজীবয়তি চাজস্রং প্রাপয়তি চাব্যয়ঃ ॥
- (b) যশে কৃষ্ণেজিরগ্রামং সংযম্য চ মনস্তথা ।
সৰ্বান্ সংসাধয়েদৰ্থানকিঞ্চৎ বোগতন্তুমু ॥
- (c) আচার্য্যব্রত বাং জাতিং বিধিবদ্বেদপারগঃ ।
উত্ পাদয়তি সাবিত্র্যা সা সত্যা সাহজরাহমরা ॥

4. (a) Explain in Sanskrit any *one* of the following passages :—

- (i) অসন্তমারাদয়তো বধ্যবৎ
বিভজ্য ভক্ত্যা সমপক্ষপাতরা ।
গুণানুরাগাদিব সখ্যমীয়া—
ন বাধতেহন্ত দ্বিগণঃ পরম্পরম্ ॥

(ii)

कूटता न पदैरपाकृता
न च न कीकृतमर्थगौरवम् ।

रचिता पृथगर्थता गिरा-

-र च सामर्थ्यमपोहितं क्वचित् ॥

(iii)

मदमानसमुक्तं नृपं

न विशुद्धं ज्ञे नियमेन मुहता ।

अतिमुक्तं उदकते नरा-

रेवहीनादपरज्याते जनः ॥

(b) Explain the formation of the words underlined in (i)

(c) Comment upon the *namana* in the word underlined in (ii)

(d) Account for the form of the roots in the words underlined in (iii)

5 (a) Translate any one of the following passages into English :—

(i)

विहारं शान्तिं नृप धाम तं पुनः
असौ सङ्गेहि वधाय विधिधाम् ।

ब्रजं शक्रनवधूय निःस्पृहाः
शमेन सिद्धिं मन्यो न भूतः ।

(ii)

उपकारकमारतेर्भूषं
असवः कर्णफलं भूरिणः ।

अनपारि निर्वर्णं द्विधा
न तितिक्षासममन्ति साधनम् ॥

(iii)

अगुरगुपहन्ति विग्रहः
अभ्रमस्तः प्रकृतिः प्रकोपजः
अखिलं हि हिनस्ति भूधरः
तत्प्रशाखान्तिनिर्वयजोऽनलः ॥

(b) Conjugate the roots of the words underlined in (i) in लृट् third person singular.

(c) Give the derivations of the words underlined in (ii).

6. Translate any two of the following passages into Sanskrit :—

(a) So true is it that every man's evil actions always bear fruits in himself, for whatever seed a man sows, of that he reaps the fruit. Therefore persons of noble character never desire that which is disagreeable to their neighbour, for this is the invariable observance of the good, prescribed by Divine Law.

(b) Thus treasure obtained by virtuous methods is continued to a man's posterity, but treasure of another kind is as easily melted away as a flake of snow when the rain begins to fall. Therefore a man should endeavour to obtain wealth by lawful methods, but a king especially, since wealth is the root of the tree of empire.

(c) As they were travelling alone, they reached a great wilderness without water, without the shade of trees, full of burning sand; and being fatigued with passing through it, and exhausted with heat and thirst, they reached in the evening a shady tree laden with fruits. And they saw, at a little distance, a lake with cold and clear water.

(d) This worthy man and his family have performed for my sake a wonderful and difficult exploit never seen or heard of any where else. Though the world is wide and various, where could there be found a man so resolute as secretly to sacrifice his life for his master, without proclaiming the fact abroad?

SANSKRIT—PASS

Second Paper

1. Either, Give in English a brief outline of the contents of the Third Act of the *Ratnavali*.

Or, State in English what you know about Kalidasa's conception regarding (a) the behaviour of a good wife. (b) hunting, and (c) the value of apparel to a natural beauty.

Or, Give in English a full history of the *Ring*.

2. Translate into English any two of the following *slokas*, and indicate the context thereof :—

(a) তীব্রাঘাতপ্রতিহততরুঃ স্বকলয়েকদন্তঃ

পাদাকুট্টরততিবলরাসঙ্গসম্মাতপাশঃ ।

মূর্ধো বিষমতপস ইব নো ভিন্নসারঙ্গম্ বো

ধর্ম্মারণ্যং প্রবিশতি গজঃ স্তম্ভনালোকভীতঃ ।

(b) পাতুম্ ন প্রথমং ব্যবস্রতি জলং মুদাম্বীপীতেষু বা

নানন্তে প্রিয়মণ্ডনানি ভবতাং হ্নেহেন বা পদবম্ ।

আছে বঃ কুহ্ম প্রযুতি সময়ে যন্তা ভবত্যাৎসবঃ

সেয়ং বাতি শকুন্তলা পতিগৃহং সর্করমুজ্জারতাম্ ।

(c) দৃষ্টা ত্রীপুরুষোত্তমস্ত সময়ে কঠে মণিঃ শক্রভি-

নঠং মন্ত্রবলৈর্বসন্তি বহুধামুলে ভুজঙ্গা হতাঃ ।

পূৰ্বং লক্ষ্মণবীরবানরভটা যে মেঘনাদাহতাঃ

* * * * * শীঘ্রা তেহপি মহৌষধেণ গনিধেগন্ধং পুনর্জীবিতাঃ ।

(d) পুরঃপূৰ্বামেবম্পরতি ততোহস্তামপি দিশং

ক্রমাত্ ক্রামিন্নিক্রমপূর বিভাগাংস্তিরয়তি ।

উপেতঃ পীনঃ তদমু চ জনস্তেক্ষণকলাং

তমঃসম্বাতোহয়ং হরতি হরকঠহ্যতিহরঃ ।

3. (a) Derive মূৰ্ধ and বিশ্ব and পীন.

(b) Comment grammatically *either* on অপীভেবু or on আদন্তে in *sloka* (b), and state with reasons if you can take ধর্মারিণ্যম্ as an instance of চতুর্থীতৎপুরুষ compound.

(c) Dissolve the compounds underlined, and in (a) and (d); suggest an alternative form for প্রিয়মণ্ডন in *Sloka* (b).

(d) Change the voice of *Sloka* (c).

4. Explain in English with reference to the context any *two* of the following extracts.

(a) সতাং হি সন্দেহপদেবু বস্তবু প্রমাণমন্তঃকরণপ্রবৃত্তয়ঃ ।

(b) কিমত্রচিৎত্রং যদি বিশাখে শশাকলেখামনুবর্তেতে

(c) বিনিপাতঃ পোরবৈঃ প্রার্থাতে ইতি ন অক্কেমমেতত্ ।

(d) ছায়া ন মুচ্ছতি মলোপহতপ্রসাদে শুক্লতুর্দর্পণতলে হুলভাবকাশা ।

(e) বিরহহতভুজাহং যো না দক্ষঃ প্রিয়ারাঃ প্রলয় দহনভাসা তন্ত

কিং ত্বং করোষি ।

5. Give in English the substance of *either* of the following *Sloka*s :

(a) বিযুক্তিং কর্ণস্ত প্রথরতিতরাং সাধনসবশাদ্

অবিস্পষ্টাং দৃষ্টিং তিরয়তি পুনর্বিস্পাদনিলৈঃ ।

খলঘর্ষণা বাণীং জড়রতিতরাং গগলদত্মা

জরারঃ সাহায্যং নম হি পরিতোবোহত কুরুতে ।

- (b) সিদ্ধান্তি কর্ণহ মহৎখপি বগ্নিবোজ্যাঃ
 সত্তাবনাগ্ণমবেহি তমীষরাণাম্ ।
 কিং বাভবিত্তদগ্ণতমসং বিভেত্তা
 তকেৎ সহস্কিরণো ধুরি নাকরিত্তং ।

6. Translate into English :—

৭ কেঅলং তবোবণবিয়হকাদরা সহী এ কব । তুএ উবঠদবিপসস্ তবোবণস্ বি দাব
 সমবথা দৌসই ।

উগ গলিঅদব ভকঅলা মঅ। পরিক্তপ্তপ্ৰণামোরা ।

ওসরিঅপ্তু পত্তা মুঅন্তি অস্ বিঅ লুদাও ॥

7. Translate into Sanskrit :—

(a) Cruel Janaki you seem to be present everywhere, but you do not take compassion on me. Alas, queen, alas! My heart splits, and the frame of my body drops down. I deem this world void of everything, and I burn internally by an unceasing flame; my inward afflicted soul sinks, and is as if plunged in utter darkness; and infatuation besets me on all sides; what shall I, a miserable wretch, do?

(b) The poet that said, 'one fault merges in a collection of good qualities,' did not properly observe human nature; for generally poverty destroys even a group of good qualities.

SANSKRIT—PASS

Third Paper

1. Translate any two of the following passages into English :—

(a) হর্বাতিবেগ শুক্লদয়্যো রাজপুত্রস্তাং লিপিমসকৃতং পঠিতুমারভত । ন খলু স্বনয়নয়ো-
 বিধ্বাসঃ । তৎ কিং সত্যমিদম্ ? প্রবমিদমবিতথং ভবেৎ ? নায়ং কশ্চিদ উপহাসপ্রকারঃ শ্রাদ্ধ-
 অথবা পিপাসাকামকর্ষণে পক্ষিণা বাচিতেহৃদ্বনি ন মেঘোচ্ছিতা ধারাস্ত মুখে নিপতিতা ।

(b) ভগবন্ কিমিদমাগমম্ ? চিরবৈরসম্বন্ধোপি জনেন প্রণয়সম্বন্ধসংস্থাপনায় কেয়ং
 সপদি জয়যুক্তির্নাম ? যো হি দক্ষেন শরেন বেধনীয়ঃ কিং তস্তৈব জনস্ত চরণমোহর্দয়তমং
 পাতয়িতুং বলবানয়মভিলাষঃ ? বস্ত খলু জয়শোণিতেনতর্পণবিধিঃ সম্পাভ্যঃ তস্তৈব চরণমোহর্দয়-
 তমং পরিলুটীতুমিচ্ছতি ।

(c) করকিশলয়তালৈরুৎকৃষ্টা তন্ম্য নর্ত্যমানো ময়ুরো বকুলশাখামাশ্রয়ং । সহচরী মনাসিক

দূরমপাসরং । রাজান্নজা সসত্ত্বং ললিতনীলহুকুলেন যমোচিতং কলেবরমাবুধানা, তদ্বদগভেন চ সৌরভেণ কদলীবিভানমাপ্রমত্তী কিঞ্চিদবনতবদনা হিতা । ন খলু তদা তস্তা বদনমণ্ডলে ব্রীড়ান্ন-
রাগরোগে খাপি অদৃষ্টত ।

(৭) আসীদ্ ভারতীয়াণাং প্রায়ঃ সৰ্বত্রৈব ন্যূনাধিকং বৈশিষ্ট্যম্ । তথাহি অন্তত্র নগরাং সভ্যভায়া উন্মেষোহস্রাকং তু কাননাং । সৰ্বত্রৈব ঐশ্বর্যং গৌরবমাবহতি, ভারতেতু ঐশ্বর্য পরাদ্বুধা বিবসনা ভিক্ৰবঃ সমাগ্রিয়ন্তে । প্রায়ঃ সৰ্ব এব আহাৰাচারণোঃ স্বতন্ত্রা ভারতীয়াস্ত আহাৰবিহারেবু শাস্ত্রমমুসরন্তি ।

2. (a) Disjoin the *Sandhis* in any two of the following :—

গবাকঃ, উখিতঃ, দশার্ণ and বৈরিণী ।

(b) Decline any four of the following :—

সখী in প্রথমা, বিশ্বপা in দ্বিতীয়া, মাস in তৃতীয়া, ভী in চতুর্থী, ভূ in পঞ্চমী, শরদ in ষষ্ঠী and ষান্ in সপ্তমী ।

(c) Conjugate any four of the following :—

জি in লট্, ধী in লিট্, হু in লৃট্, য় in লোট্, ত্রে in লঙ্ and শ্ব in বিধিলিঙ্ (all in the third person).

(d) Derive any four of the following :—

বিদ্ববী, বশস্তম্, কতি, হান্তিকম্, ক্ষেপিষ্ঠঃ, মুচ্চঃ and শিষ্টঃ ।

(e) Substitute single words for any two of the following :—

রাজা ইব আচরতি, রাজানমিব আচরতি, পুত্রং কৰোতি, and বাপমৃষমতি ।

(b) Form *Samasas* in any four of the following cases :—

রূপস্ত যোগ্যম্, তন্মৈ ইদম্, অৰ্দ্ধং গ্রামস্ত, পাচিকা ক্রী, কুংসিতঃ অথঃ and পূৰ্বং রাত্রোঃ ।

3. Correct or justify any four of the following :—

(a) মে অশ্বমারোচ্চং রোচতে ।

(b) ক্রোধো মাৎসৰ্য্যং নিষ্ঠুরতা চ সদা গৰ্হণীয়াঃ ।

(c) এনাং ভবতে অমুরজাঃ কিং নিকায়শেন তাজসি ।

(d) দশরথঃ ত্রিভাৰ্য্যাস্থ পুত্রচতুষ্টয়মুদপাদি ।

1925

SANSKRIT—PASS

First Paper

1. *Either*, Enumerate the means of livelihood recommended by Manu to be followed by a Snataka in normal times.

Or, State any six occasions necessitating cessation of study (Anadhyayas).

2. (a) Translate any *two* of the following stanzas into English:—

(i) न समयपरिरक्षणं क्वमं ते निवृत्ति-परेषु परेषु भूरिधनः ।

अरिषु हि विजयार्थिनः कितीनां विदधति सोपधि संविदूषणानि ।

(ii) शिवमोपधिकं गरीयसीं कलनिष्पत्तिमद्वितीयतीम् ।

विगणया नयन्ति पौकषं विजितक्रोधयया जिगीषवः ॥

(iii) अपवर्जितविषये गुटो हृदयग्राहिणि मङ्गलान्पदे ।

विमला तव विसृजे गिरां मतिरादर्श इवाभिदुष्टते ॥

(b) Comment grammatically on either of the underlined words in Extract (ii).

(c) Give any one form of the root of the word underlined in Extract (iii) in लृट् third person singular.

3. Give the substance in English of any *one* of the following stanzas :—

(a) उदारकीर्तेरुदयं दयावतः प्रशान्तबाधं दिशतोहतिरक्का ।

वयं प्रहृष्टेभ्यः शुभैरूपान्नुता बहूपमानान् बहूनि मेदिनी ।

(b) अतिमानधनं गन्धैरसुखं ह्यनू वशमिच्छीयतः ।

अचिरांतुविलासकला ननु लम्बाः कलामासुवजिकम् ॥

(c) Comment grammatically on प्रहृष्ट in (a).

4. (a) Explain in English the idea contained in the following *shloka* :—

विषयमदयः ह्येवमसां गुणरत्नतयः सुवर्णः ।

न महानपि भूतिमिच्छता ह्यसम्पदं प्रवृत्तः परिकरः ॥

(b) Comment on the formation of the word *हमेवम्* and conjugate the root of *विबतः* in लिङ् third person singular.

5. Clearly explain the difference between *वय* and *नियम*. Which of the two is superior in merit ?

6. Translate *either* of the following stanzas into English :—

(a) अग्निहोत्रं च ज्ञेयमादात्तं ह्यनिशो सदा ।

दर्शनं चाधर्मासांते पौर्णमासेन इव हि ।

(b) पाषाणिकं विकर्महानं वैतालव्रतिकान् शठान् !

हेतुकान् वक्तुं शक्यं वाङ्मात्रेणापि नाचयेत् ॥

(c) Write notes on the underlined expressions in (b)

7. Explain with illustrations :—

(a) परितज्जेदर्थकामो यो धर्मवत्स्यतां र्जते ।

धर्मं वाप्यह्मबोधकं लोकविक्रुष्टमेव च ॥

(b) What is आकालिक अनधाय ?

8. Translate into Sanskrit any *two* of the following passages :—

(a) The father and mother of the prince heard of their son's intention, and their hearts misgave them. For they knew and distrusted King Gandhara and the old King told of his doubt to his son.

(b) After these unhappy events, Halayudha made up his mind to leave the city at once, and early the next morning he and his wife prepared to set out for their own home.

(c) 'Your menaces move me not ; my life is at your disposal. Here is my sword ; plunge it into my breast, and divide my flesh among you. But expect no surrender so long as I am alive.'

SANSKRIT—PASS

Second Paper

1. *Either*, Describe in English the character of *Kanva*.

Or, Describe in English the scene of the *Uttararamacharita* where *Lava* and *Chandraketu* meet each other.

2. Translate into English any *two* of the following *slokas*, and indicate the context thereof :—

- (a) বা স্বষ্টিঃ স্রষ্টা স্রাজ্য বহতি বিধিত্বতঃ বা হবির্বা চ হোত্ৰী
 যে মে কালং বিধন্তঃ ঋতিবিরগুণা বা হিতা বাপ্য বিধন্ ।
 যামাহঃ সর্ববীজপ্রকৃতিরিত্তি বরা প্রাণিনঃ প্রাণবন্তঃ
 প্রত্যক্ষাভিঃ প্রপন্নতনুভিরবতু বন্তাভিরষ্টাভিরীশঃ ॥
- (b) প্রাহ্বা দিশধা হিতস্য মুনরো যন্তেজসঃ কারণম্
 ভর্তারং ভুবনত্রয়স্য হৃদয়ে বহু বজ্রভাগেশ্বরম্ ।
 যম্মিন্নান্নভবঃ পরোহপি পুরুষশচক্রে ভবান্নান্দম্
 বন্দ্যং দক্ষমরীচিসম্ভবমিদং তত্ প্রষ্টুং রেকান্তরম্ ॥
- (c) হং বক্ষি মুনরো বশিষ্ঠগৃহিণী গঙ্গা চ বস্যা বিদ্ব-
 মাহাভ্যাম্ যদি বা রঘোঃ কুলগুরুর্দেবঃ পরং ভানুরঃ ।
 বিজ্ঞা বাগিব বামশ্রুত ভবতী, তদ্বজ্ বা দৈবতম্
 তস্যাস্থং হুহিতুস্তথা বিশসং কিং দারুণেহম্মাখাঃ ॥
- (d) সৰ্বকাম্পহৃণীয়াতাপ্রমুদিতৈর্জ্যোতৈর্বশিষ্ঠাদিভি-
 দ্ভূতৈঃপাত্যবিবাহমঙ্গলমহে তন্তাতরোঃ সংগতম্ ।
 পশুন্নীদৃশমীদৃশে পিতৃসখং বৃন্তে সহাবৈশসে
 দীর্ঘে কিং ন সহপ্রধাহমথবা রামেণ কিং হৃক্ষরম্ ॥

3. (a) Account for the case-ending in সর্ববীজপ্রকৃতিঃ and তনুভিঃ in *sloka* (a).

(b) Explain fully the last line of *sloka* (b).

(c) Would রামত্ব instead of রামেণ be incorrect in *sloka* (d); Give reasons for your answer.

(d) Explain the formation of প্রত্যক্ষাভিঃ and পিতৃসখং and expound the *samasa* in ঋতিবিরগুণাঃ and সৰ্বকাম্পহৃণীয়াতাপ্রমুদিতৈর্জ্যোতৈঃ as used above.

(e) Derive বশিষ্ঠ, বজ্রঃ, and দৈবতম্ ।

4. Explain in English with reference to the context any two of the following extracts :—

- (a) পরাভিসন্ধানমধীরতে বৈৰ্বিভেতি তে সন্ত কিলাপ্তবাঃ ।
 (b) তপঃবন্ত ভাগবতকব্যং দদত্যাৱণ্যকা হি নঃ ॥

(c) এশেণাম অণুগ্গহে জে শূগাণো অবদালিত হত্যিক্তে পঠিঠাষিদে ।

(d) গুণাঃ পূজাহানঃ গুণি ন চ লিঙ্গং ন চ বয়ঃ ।

5. Give in English the substance of *either* of the following verses :—

(a) যাতোকতোহন্তশিখরং পতিরৌবধীনাম্
আবিষ্কৃতোহরুণপুংসরঃ একতোহর্কঃ ।

তেজোহমন্ত যুগপদ ব্যাসনোদয়াভ্যাং
লোকো নিয়ম্যত ইবান্নদশান্তরেব ॥

(b) একো রসঃ করুণ এব নিমিত্তভেদাদ—
ভিন্নঃ পৃথকপৃথগিবাশ্রয়ে বিবর্তান্ ।
আবতবুদবুদতরঙ্গময়ান্ বিকারান্
অন্তো যথা সলিলমেব তু তৎ সমগ্রম্ ।

6. Translate into English :—

(a) জইবি গাম বিসঅপরম্মুহস্স জণস্স এদং ৭ বিদিঅং তইবি বেণরর সউপ্পাএ অণজ্জং
আচরিয়ং ।

(b) হা সোম্ম অজ্জউত্ত কহিমি । হন্ধী হন্ধী দুস্সিবিণেণ বিম্বলঙ্কা অহং অজ্জউত্তং
অক্কাম্মামি ।

* 7. Translate into Sanskrit :—

(a) What are you sitting there for, lost in thought ? 'I am sitting thinking about you', said he. 'Oh, Sir ! what are you thinking about us ?' said they. 'Why', he replied, 'there is very little water in this pond, and but little for you to eat ; and the heat is great ! So I was thinking what in the world will these fish do now ?' 'Yes, indeed, Sir ! what are we to do now ?' said they.

(b) The villain though exceedingly clever,
Shall prosper not by his villainy.
He may win indeed, sharp-witted in deceit,
But only as the Crane here from the Carb.

SANSKRIT—PASS

Third Paper

1. Translate any *two* of the following extracts into English :—

(a) হুবিদিভস্মেতং ভবতাঃ বদ বৈদেশিকাঃ কেচন বিশ্বাসন্তথা তমুপদেশান্ প্রমাণতয়া

মানরক্তঃ কেচন হুশিক্ষিতমানিনো ভারতীয়া অপি সডিষ্টমধোঃসমস্তাভূদ্বোবয়স্ন্তি যৎ অমরভারতী
খব্রাকমিয়ঃ সূতা, অন্তাঃ সমুদ্রতয়ে ইদানীং প্রয়াসঃ । সৰ্ব্বথা শ্রিরবকস্রমাত্ৰখলপ্রসবায় কলিজগতে
ইতি বিবেকিনামুপেক্ষাতামৰ্হনীতি ।

(b) বয়স্ক মস্তামহে ইয়মেবান্না সঞ্জীবন্তোবধিরিতি । তব হি, আত্মবিশুদ্ধিত্তিরেবাত্মাকং
সর্ধানর্থনিদানম্, তাং সমুৎসারয়তি ন খলু এবরেয়ুঃ সমন্তৈরপি ভারতীরৈঃ সমভ্যাত্তাঃ সৰ্বা অপি
পাশ্চাত্ত্যবিচ্ছাঃ পরং তদর্থং ভারতীয়ানামাত্মস্থতিরেব অত্যাবশ্যকমপেক্ষায়া দেবতাভ্যামেবাবলম্বতে
আত্মলাভায় ।

(c) জীবলোকস্য সমগ্রং হৃথমভূতবিত্তং প্রাপ্তজনানামপি ধনিনাং নাগরিকাণাং
সময়বিশেষেষু ভবতি বনগমনে মহান্ মানসোল্লাসঃ । বনস্য অন্ত্যাদৃশং রামণীবকমেবাশ্চ হেতুঃ ।
তাপসাস্ত তপঃ সিদ্ধার্থং নাত্তথা ইন্দ্রিয়নিগ্রহাদ্ ঘটতে, নগরে নিবসতাং রাগষেবাদিভিরূপমুত-
মানসানাং স ইন্দ্রিয়নিগ্রহো ন হুলভঃ ।

(d) বহুদূরং গতো তৌ দম্পতী । প্রথররবিকরক্লিষ্টৌ যদি কুত্রচিৎ পাদপচ্ছায়াশিপ্রিয়তুস্তথাপি
কৰ্তব্যভারতাড়িতৌ তত্র ক্షমপি অবস্থাতুঃ ন শক্ন্তে । অনন্তরং বহুপ্রান্তরাতিক্রমণাবসন্নশরীরৌ
তৌ বারিষট্চকং জলধরমিব দূরাৎ লোকালয়পরিব্যস্তকং গৃহপুঞ্জং বিলোক্য হ্রসিতগমনং তদভিমুখং
গচ্ছন্তৌ পশিদ্ভটৌ কেনাপি মহাপুরুষেণ ।

2. (a) Form *sandhi* in any *three* of the following :—পিতৃ + স্বর্ণম্,
তৎ + জ্ঞানম্, উৎ + দাসঃ, and প্রাতঃ + গচ্ছ ।

(b) Decline any *four* of the following :—ব্রাহ্ম in প্রথম, রৈ in দ্বিতীয়,
অশ্বম্ in তৃতীয়া, সম্রাজ্ in চতুর্থী, সৎ in পঞ্চমী, পশিন্ in ষষ্ঠী, and বিষম্ in সপ্তমী ।

(c) Conjugate any *four* of the following :—কৃৎ in লট্, বস in লিট্, অস্
in লোট্, শৃ in লঙ্, বৃৎ in বিধিলিঙ্, and লভ্ in লৃট্ (all in the third person).

(d) Derive any *five* of the following :—ভূতাঃ, ভোগ্যম্, শয়ানঃ, যুযধানঃ,
দ্রুতম্, পূর্ণঃ, ক্রীণঃ and বিচ্ছ ।

(e) Substitute single word for any *three* of the following :—পতিতু-
মিচ্ছতি, পুনঃ পুনঃ পঠতি, তপঃ চরতি, শব্দং করোতি, and মিশ্রং করোতি ।

(f) Form *samasas* in any *four* of the following :—গ্রামস্ত অর্ধ, অর্ধং গ্রামস্ত,
গ্রামস্ত পন্থাঃ, গ্রামস্ত সমীপম্, অস্তো গ্রামঃ and গ্রামমতিক্রান্তঃ ।

3. Correct or justify any *three* of the following :—

- (a) ভূতেন ভাৱঃ গৃহং নীরতে ।
 (b) প্রভুত্বং নারিতৈবিকং প্রতিপোতি ।
 (c) প্রভুত্বং ভাৱঃ নীরতে ।
 (d) ভূতাঃ জনো হুঃখশতানি ভুনক্তি ।
 (e) প্রভুচিন্ত্য হি ভূত্যাং হুঃখজতে ।

4. (a) Write what you know about any *two* of the following :—
 Bhavabhuti, Rajashekhara, Kanada, and Madhavacharya.

(b) Write short notes on any *two* of the following :—The
 Bhagavata Purana, the Nalodaya, the Setubandha, and the Ghata-
 karpura.

(c) *Either*, Narrate the general characteristics of the works going
 by the name of *Purana*.

Or, Discuss the remark : 'The Ramayana originally consisted
 of five books only.'

1926

SANSKRIT—PASS

First Paper

1. *Either*, Give a short sketch of the beauties of autumn as
 described by Bharavi.

Or, Give in your own language a summary of Draupadi's message
 to Arjuna on the eve of the latter's departure.

2. *Either*,

কৃত্যমুতাভ্যাং জীবন্ত যুতেন অমৃতেন বা ।

সত্যানুভাভ্যামপি বা বসুভ্যা কদাচন ॥

Whom does the injunction embodied in the above *sloka* concern ?
 Fully explain the technical terms.

Or, Explain the meaning of the words underlined in the follow-
 ing *sloka*, and give reasons why each succeeding type has been
 accorded a higher place by Manu.

কুহলধাতুকো বা স্যাৎ কুতীধাতুক এব বা ।

জ্যোতৈহিকো বাপি ভবেদধাতুনিক এব বা ॥

3. Explain fully in English any *two* of the following extracts :—

(a) জ্ঞানেনবাপরে বিপ্রা বজন্তোতৈমথৈঃ সনাঃ।

জ্ঞানমূলং ত্রিমাংসং পশুন্তো জ্ঞানচক্ষুঃ ॥

(b) বুদ্ধিবুদ্ধিকরাণাং ধনানি চ হিতানি চ।

নিত্যং শাস্ত্রাণ্যবেক্ষ্যেত নিয়মাশ্চৈব বৈদিকান্ ॥

(c) স ক্ষত্রিয়ব্রাহ্মণসহঃ সত্যং যঃ

তৎকার্ষকং কৰ্মহু বস্যা শক্তিঃ।

বহনু যয়োঃ বভূবুলেহৰ্ধজাতে

করোত্যলংকারবভাষিভোক্তিন্ ॥

4. Translate into English any *two slokas* from *either* of the groups :—

Group A

(a) উপারতাঃ পশ্চিমরাজিগোচরাং

অপারমন্তঃপতিতুং জবেন গান্।

তমুত্ৰহ্কাশ্চক্ষুরবেক্ষণেংহ্রকম্

গবাং গণাঃ প্রভুতপীবরোধসঃ ॥

(b) বিহারভূমেরভিধাসমুৎস্রকাঃ শরীরজ্যেষ্ঠ্যরচ্যতযুৎপংক্তয়ঃ।

অসন্তমুখংসি পয়ঃ ক্ষরন্ত্যমুরপায়নানীব নয়ন্তি ধেনবঃ ॥

(c) অনেন যোগেন বিবৃদ্ধতেজাঃ নিজাং পরমৈ পদবীমযচ্ছন্।

সমাচরাচারমুপাশ্রিত্বো জপোপবাসাভিষবৈশ্বীনান্ ॥

Group B

(a) জহাতু নৈনাং কথমর্থসিদ্ধিঃ সংশয়া কণাসিহু তিষ্ঠতে যঃ।

অসাধবোগা হি জয়াস্তরারাঃ প্রমথিবীনানং বিবদাং পদানি ॥

(b) কৃতো ভিরেখং শিখিলবদ্যতা শনৈঃ শান্তরয়েণ বারিণা।

নিরীক্য রসে স সমুদ্রোনিতাং তরজিতং ক্ষৌববিপাতুসৈকতম্ ॥

(c) ধর্মধর্মজী সদা লুপ্তাশ্মিকো লোকদম্বকঃ।

বৈড়ালব্রজিকো জ্ঞেয়ো হিংস্রঃ সর্কাসিসম্বকঃ ॥

5. (a) Expound the *samasas* in the word পশ্চিমরাজিগোচরাং in Group A

(a). How would you account for the variant পশ্চিমরাজিগোচরাং ?

(b) Account for the fourth case-ending in শরীরভেদ্য: in Group A (b).
Can you substitute any other case-ending ?

(c) Account for the *atmanepada* in ভিত্তে in Group B (a). Give the third person singular form of the root in both the *padas* in লিট্ ।

(d) Conjugate the root of আয়ত in Group B (b) in the third person singular in লঙ and লৃঙ.

6. (a) *Either*, Cite at least four specific instances of person whose food is taboo to a Snataka.

Or, Fully explain the difference of meaning existing between আকালিক and সজ্যোতি: *anadyaya*.

(b) Comment grammatically on the formation of the words আকালিক and সজ্যোতি ।

(c) Write notes on any *two* of the following expressions—পক্ষিণী বাক্তি, উপকূৰ্ণাণ, আর্জিক, দর্শে, and পৌর্ণমাস ।

7. Translate any *two* of the following extracts into Sanskrit—

(a) These edicts, which were chiefly intended for the moral and religious advancement of the people, show how great and good a king Asoka was. In them he proclaimed universal religious toleration and moral persuasion as the best means of converting unbelievers .

(b) Their army was decidedly superior to any other Indian army of the time, while their entire confederacy still followed the lead of one man. They might now well expect that the sovereignty of the whole of India would presently fall into their grasp.

(c) The main principles of the Gita are that self must give way before one's appointed duty to mankind, that the soul never dies, that perfection can be attained by selfculture, and that every form of worship, if sincerely offered, is acceptable to God.

(d) One caste does not consider itself superior by reason of wealth or social standing. Such nobleness is a mark of class distinctions in the west. In India a man is not despised because he is poor and of humble occupation as he often is in the west.

SANSKRIT—PASS

Second Paper

1. *Either*, Give in English a short history and description of the *jrimbhakastras*. What part do they play in the *Uttararamacharita*.

Or, State in English what ideas you have formed regarding the morals of the police, prevalence of animal sacrifice, and the revenue system in the days of Kalidasa.

2. Translate into English any *two* of the following *slokas*, and indicate the context thereof—

(a) অধৈতং স্থপত্নঃখম্মোরহুত্ত্বং সৰ্ব্বাৰবহাহু বদ্
বিশ্রামো হৃদয়ন্ত যত্র হ্রস্বা যন্নিগ্নাহাৰ্য্যো রসঃ ।
কালোবরণাভায়াং পরিণতে যত স্নেহসারে স্থিতং
ভজং প্রেম স্তম্ভাসু বস্যা কথমপ্যেকং হি তং প্রাপ্যতে ॥

(b) মহিমা মে তস্মিন্ বিনয়শিঙতা মৌক্ষ্যমগ্ণে
বিদকৈনিগ্রীহো ন পুনরবিদকৈরতিশয়ঃ ।
মনো মে সন্মোহঃ স্থিরমপি হরত্যেব বলবান্
অবোধাতুং বধ্যং পরিলঘুৰবদান্তশকলঃ ॥

(c) অস্মান্ সাধু বিচিন্ত্য সংযমধনান্নক্কে: কুলং চান্ধন:
খন্ধ্যাঃ প্রথমমপ্যাবাক্ষবকৃতাং স্নেহপ্রবৃত্তিকৃতাম্ ।
সামান্তপ্রতিপত্তিপূৰ্বকমিহ দারেবু দুস্তা দয়া
ভাগ্যায়ত্তমতঃপরং ন খলু তদাচাং বধুবহুভিঃ ॥

3. (a) Dissolve the compounds underlined in question 2.

(b) Parse সাধু in 2 (c) and অতিশয়ঃ in 2 (b).

(c) Change the voice of *sloka* 2 (c).

4. Give in English or in Sanskrit the substance of *either* of the following *slokas* :—

(a) রম্যাদি বীক্ষ্য মধুদ্রাক্ষে নিশম্য শব্দান্
পর্যুৎসুকো ভবতি যৎ স্থখিতোহপি জন্তঃ ।
তক্কেতসা স্মরতি নুনমবোধপূৰ্ব্বম্
ভাবস্থিরাশি জননান্তরসৌহৃদানি ॥

(b) শিঙৰা শিঙা বা বদসি মম তত্তিষ্ঠতু তথা

বিভুজ্জৈতকৰ্ণস্থায়ি তু মম শক্তিঃ জনয়াত্ ।

শিঙৰাঃ শৈঙাঃ বা ভবতু নমু বন্দ্যাসি জগতঃ

ঋণাঃ পূজাহ্বানঃ ণিনিমু ন চ লিঙ্গং ন চ বয়ঃ ।

Derive শৈঙা, স্থখিত, and comment grammatically on the expression
ঋণাঃ পূজাহ্বানম্ ।

5. Render into Sanskrit and translate into English :—

(a) হুট্টু দাব জন্ত সঙ্কলচাৰিণী কিম মিহ জা অহং ইমস্ পুৰবৎসল্লভএণ হিঅ
অৰ্ঠিঅবিসস্ মুহমহণে হম্বভাসং উবগআ ।

(b) হা কথং সীদাদেঐএ ঈদিসং অচিন্তনিজ্জং জজ্জাবাবদং দেবস্ কথয়িস্ । অহবা
গিণ্ডগ কথু মে ইরিসো মলভাঅস্ ।

6. Explain in English or in Sanskrit with reference to the
context any three of the following extracts :—

(a) অক্ষতামিশ্রা হৃদ্যুয়া নামতে লোকান্তেভ্যঃ প্রতিবিধীয়ন্তে য আশ্বাভিনঃ ।

(b) পুটপাকপ্রতীকাশে রাষস্য করুণো রসঃ ।

(c) উক্তঞ্চ পূৰ্ব্বেমায়ুৰ্মতামাজ্জা পরিত্যাগে যথা ভগবতি বহুক্ষরে জাযাং জুরিতরমবেক্ষণ
জানকীমিতি । তদধুনা কৃতবচনান্মি প্রভোৰ্বৎসসেতি ।

(d) অতম্বু বিভবেবু জাতরঃ সন্ত নাম

ত্ময়ি তু পরিসমাপ্তং বহুকৃত্যং জনানাম্ ।

(e) স্পর্শামুহুলা ইব সূৰ্য্যকান্তাত্তদন্ততেজোহভিভবাদ্ বমস্তি ।

Account for the case-ending in বিভবেবু in (d). and write gram-
matical notes on অহুৰ্য্যঃ and প্রতীকাশঃ ।

7. Translate into Sanskrit :—

The king reflected ; “Feel no fear” would be a haughty saying.
“You will yet reach happiness” these words would fail owing to their
shallowness. By saying “I am not angry with you now” the former
acts of enmity would be effaced. “You are our relative,” this would
be like scorn on the present occasion. “You are in distress,” would
be boasting of the might of one’s own glory. Recognizing this,
the king did not favour him with any word.

SANSKRIT—PASS

Third Paper

1. Translate any two of the following extracts into English :—

(a) মুখে, দময়ন্তি, দেবানবভূয় মামুখং বৃথতী দেবকোপাদপি ন জীতাসি, অহো সাহস, সাস্ত্রিতি পশ্চন্নং কীদৃশস্তে ফলামুখ ইতি । মূৰ্খ, ধৰ্ম্ম, পরিরক্ষ সাস্ত্রতঃ বনায় প্রতিষ্ঠমানং অষ্টরাজ্যঃ ষাণ্মুগতঃ নিবধনাখম্ । ক সাস্ত্রতঃ তে গৰ্বঃ ? কিমু নাবলোকয়সি ষাণ্মুগতস্য জনস্ত বৰ্ত্তমানমবস্থাপতম্ ? তদাকৰ্ণয় বদমা অপরমপি করিষ্যতে ।

(b) প্রিয়ে, নাহং ন জানামি যথা হুচিরমেবভূতা বিদৰ্ভরাজনন্দিনীতি, তথাপি কথয়ামি কিমেবং খেচ্ছসি অতিকূলং পছানমালিঙ্গসি ? ঈদৃশে হুবিষমে দশাস্তরে যদি ভবতীমপি দুঃখমুক্তামুপলব্ধেরয়, তদাপি নিতরাং শান্তিমমুভবেয়ম্ । তং দেবি, প্রতিষ্ঠতাং ভবতী বিদৰ্ভেবু ; অমরদূরে দৃষ্টতে বিদৰ্ভগামী পস্থাঃ । অহমেকাকী কান্তারপথা প্রস্থিতঃ কথংকিনাজানং ধারয়িষ্যে ।

(c) আবাত্তাং কাননে হাতব্যং, স্বত এব কাননে জাতানি ফলমূলাদীনি সমাহৃত্য তৈরেব জীবনং ধারয়িতব্যম্ অতিদূরে সংসারকোলাহলাং কেবলং ত্বদীয়েন হুথেন বয়া। মম পরমানন্দেন ত্বয়া পরমং হুখমমুভবিতব্যম্ । যদৃচ্ছসি লতাপাদপপতিতানি কুহুমানি স্বয়ং সঙ্কিতা নিপুণতঃ প্রসাধিতশরীরে অহং বনদেবী ভবিষ্যামি, ত্বমপি তথৈব সরলকৃত্য কুহুমালঙ্কারৈঃ প্রত্যহং বনদেবং বিধাস্যামি ।

2. (a) Decline the bases of পূর্ণিমা, নীলিমা, রামা and ভূমা in দ্বিতীয়া, তৃতীয়া, চতুর্থী and পঞ্চমী respectively.

(b) Derive all the words of the following sentence, and conjugate the roots thus formed in লঙ্, third person singular :—

বিদ্বদ্বাখ্যাপকানাং ছাত্রাঃ পরীক্ষায়ামবতীর্ণাঃ ।

(c) Reconstruct any two of the following sentences, each new sentence consisting of two simple words only :—

যে জ্ঞাতুমিচ্ছতি তে প্রশ্নং কুর্ক্বন্ত ।

যে উত্তরিতুমিচ্ছতি তে অতর্ক্যং পঠন্ত ।

যে জ্ঞেতুমিচ্ছতি তে কলহং কুর্ক্বন্ত ।

ব আশ্বনঃ পুত্রমিচ্ছতি স তপঃ করোতু ।

(d) Form as many *samāsas* as are possible in the following sentence :—

স পুত্রের সহ রাজী চ দিবা চ পরিভ্রম্য পথঃ সমীপে তরশাং ছারারামপৰিষ্টঃ ।

(e) Correct all the errors in the following extract :—

একদা গজায়াং প্রাতঃকালং কুৰ্ণাণ কচ্চিৎ বিপ্রঃ শ্রোতেন নেয়মানাং মক্ষিকাসেকাং দৃষ্ট্৷ ।
কুপয়া তমুচ্চার । উচ্চারমায়ে চ ব্রাহ্মণম্ এবমদংশং যং স নিতরাং জালামুভূতঃ ।

3. (a) Write what you know about any *two* of the following authors :—Bilhana, Kalhana, Hala, and Bhatta Narayana.

(b) Write short notes on any *two* of the following works :—Nagananda, Kusumanjali, Dayabhaga, and Dhammapada.

(c) *Either*, State what you understand by the expression 'Classical Sanskrit.'

Or, Give a brief account of the Brahmi script.

(d) What are the reasons for supposing that the Panchatantra is derived from Buddhistic sources ?

1927

SANSKRIT—PASS

First Paper

1. Various modes of subsistence (বৃত্তি) have been laid down by *Manu* for a householder. Mention any *five* of such modes.

2. What are *yamas* and *niyamas*? Distinguish between them citing authorities in support of your answer.

3. Translate into English *two* only of the following stanzas :—

(a) বোহস্তথা সন্তমাস্তানমন্তথা সংস্র ভাষতে ।

স পাপকুন্তমো লোকে স্তেন আত্মপহারকঃ ।

(b) বাচাৰ্থাঃ নিয়তাঃ সৰ্ব্বং বাঙ্ৰালা বাধিনিঃ কৃত্য ।

তাংস্ত যঃ স্তেনয়েষাচং স সৰ্ব্বস্তেয়কুপ্তরঃ ।

- (c) ধর্মঃ স্তূপৈঃ সন্ধিস্থানাং বন্দীকরিব পুস্তিকাঃ ।
পরলোকসহায়ার্থং সর্বভূতান্তপীড়য়ন্ ।
(d) অক্ষরেষ্টক পূর্তক নিত্যং কুর্ধ্যাদভজিতঃ ।
অদ্বাকৃতে হৃদয়ে তে ভবতঃ স্বাগতৈর্ধনঃ ।

4. Give in your own words in English the substance of any *two* of the following stanzas :—

- (a) সন্তোষং পরমমাহুয়ং হৃদ্যার্থী সংযতো ভবেৎ ।
সন্তোষমূলং হি হৃদং হৃৎখমূলং বিপর্যায়ঃ ।
(b) নান্নানমবমন্তেত পূর্বাভিরসম্বন্ধিভিঃ ।
আহুতোয়াঃ প্রিয়মবিস্ফেদ্যৈনাং মন্তেত ছলভাম্ ।
(c) সত্যং ক্রমাৎ প্রিয়ংক্রয়ান্ন ক্রমাৎ সত্যমপ্রিয়ম্ ।
প্রিয়ঞ্চ নানুভবং যতোএব ধর্মঃ সনাতনঃ ।

এন is always regarded by Sanskrit grammarians as a *defective* pro-nominal stem. State your reasons for it. Comment on আহুতোয়াঃ ।

5. Give the formation and explain the sense of the following technical terms :—

কব্য । স্বাতক । অনধ্যায় । অষ্টক ।

6. Explain in English the following stanza :—

প্রিয়ঃ কুরূনামধিপন্ত পালনীয়ম্
প্রজাহ বৃদ্ধিঃ সমযুক্ত বেদিতুম্ ।
স বর্ষিলিঙ্গী বিদিত সমাযযৌ
যুধিষ্ঠিরঃ শ্বেতবনে বনেচর ।

(a) Account for the retention of the locative case in যুধিষ্ঠির and বনেচর Join together into one compounded form the words প্রজাহ পালনীয় বৃদ্ধিঃ Comment grammatically on the words কুরূনাং and বিদিতঃ.

(b) Relate in your own words the nature of the spy brought to Yudhishthira.

7. Translate into English *either* of the following groups, but not both :—

GROUP A

- (a) स किं सखा साधु न शान्तिं बोधिषिणः
 हितारं वः संशृणुते स किं प्रह्वः ।
 सदाशुक्लेषु हि कुर्वते रतिं
 नृपेक्षमातोषु च सर्वसम्पादः ।
- (b) दुरक्षान् दीव्याता राज्ञा राज्याम्ना वरं वधुः ।
 नीतानि पणतां नूनमुदृशी भविष्याता ।

GROUP B

- (a) अवकाकोपस्तु विहङ्गरापदाः
 उवस्ति वक्त्राः श्रममेव देहिनः ।
 अमर्बशुक्लेन जनस्तु जङ्गना
 न जातहादे'न विविधादरः ।
- (b) या गम्याः सत्सहारनां वामुक्तेषां भयं वतः ।
 तासां किं वरं ह्येव विवदासिब सम्पदाम् ।

(i) In extract (a) under Group A, notice the peculiarities in the compound किं सखा and account for the आङ्गनेपद in संशृणुते ।

(ii) In extract (a) under Group B, show how the commentator has split up विविधादरः in two different ways, and derive हाद' in जातहादे'न ।

8. Give in English or in your own vernacular the central idea of one only of the following extracts :—

- (a) शक्तिवैकल्यानस्तु निःसारद्वारधीयसः ।
 जग्निनोमानहीनस्तु तृणस्तु च समा गतिः ।
- (b) दुरासदवनज्यारान् गम्याङ्गकोहपि भूधरः ।
 न जहाति महौजस्कं मानप्राङ्मलज्वाता ॥
- (c) हित्यतिश्रान्तजीरुनि ब्रह्माङ्गाकुलितान्तरि ।
 तौमानि तौरगाशीनां मनांसि च मनश्चिनाम् ।

9. Translate into Sanskrit the following extract :—

The tournament of the princes in which Arjuna and Karna first met and each marked the other for his foe, the gorgeous bridal of

Draupadi, the equally gorgeous coronation of Yudhishtira and the death of the proud and boisterous Sisupala, the fatal game of dice and the scornful wrath of Draupadi against her insulters, the calm beauty of the forest life of the Pandavas, each scene of this venerable old Mahabharata impresses itself on the mind of the hushed and astonished reader.

SANSKRIT—PASS

Second Paper

1. *Either*, What were the pieces of evidence with the aid of which Dushyanta came to recognize his son ? Which of them was the most conclusive ?

Or, Give an outline of the incidents narrated in the introduction to the second act of the *Uttararamcharita*.

2. Translate into English *either* of the following groups :—

A

(a) অধাক্রান্তাবসতিরমুনাপ্যাশ্রমে সর্বভোগ্যে
রক্ষাবোগাদয়মপি তপঃ প্রত্যহং সন্ধিনোতি ।
অস্ত্রাপি ভাং স্পৃশতি বশিনশ্চারণবন্দ্যগীতঃ
পুণ্যঃ শব্দো মুনিরিত্তি গ্রাহঃ কেবলং রাজপূর্বঃ ॥

(b) বাস্পবর্ষণে নীতং বো জগদ্বজ্রলমাননম্ ।
অবস্থারানুকূলিত পুণ্ডরীকস্ত চারুতাম্ ॥

(c) কষ্টমেবং নাম উরসা হুঃখেন চ দে ন ভূয়ঃ পরাকসান্তপন প্রভৃতিভিত্তিপোভিরাস্তরস-
ধাতুরনুপয়জ্যমানো নাভ্যাপি মে দক্ষদেহঃ পততি । অক্সতামিত্রা হুর্হুয়া নাম তে লোকান্তেষাঃ
প্রতিবিধীরন্তে য আত্মঘাতিন ইত্যেবম্পরো মন্তন্তে ।

B

(a) দদতু তপঃ পুষ্কররথ্যং কলৈশ্চ মধুশ্রুতঃ
ক্ষুটিতকমলামোদপ্রায়াঃ প্রবাস্তবনানিলাঃ

কমলবিরলং রত্নাত্ কষ্ঠী কণ্ঠ শকুন্তলঃ

পুনরিদময়ং দেবো রামঃ স্বয়ং বনমাগতঃ ॥

(b) দিষ্ট্যা শকুন্তলা সাধবী সদপত্যমিদং ভবান্ ।

ব্রহ্মা বিজ্ঞঃ বিধিপ্রতিং ত্রিতপং তং সমাগতম্ ॥

(c) (অনুর্বাচ) কথং সমুদ্রব্যবহারো ধনমিত্রো নাম নৌবাসনে বিপন্নঃ । জনপত্যশ্চ কিল তপস্বী । রাজগামী তত্তার্বসকয় ইত্যেতদমাতোনে লিখিতম্ । কষ্টঃ খবনপত্যতা । বেত্রবতি বহনবাং বহপত্নীকেন তত্ত্রবতা ভবিতব্যম্ । বিচার্যতাং যদি কাচিদাপন্নসত্বা তন্ত ভাৰ্য্যাহ ত্রাং ।

3. (a) Write grammatical notes on প্রত্যাহ্ and বহপত্নীকেন ।

(b) Give the locative plural form of the base of ভাৰ্য্য ।

(c) Derive আন্ত and ছরাসদ and give the লুট্ forms of their roots in the third person singular.

(d) Account for the case-ending in ভাৰ্য্যাহ in B. (c).

(e) Indicate the context of either of the passages and fully explain the second line of B (b).

4. Explain fully any four of the following extracts :—

(a) ইমং জীদসকস্মৈ ৭ বি অবিহিবিসেং কদখং করিস্মদি ।

(b) ন খলু ধীমতাং কশ্চিদবিষয়ো নাম ।

(c) নুনং প্রসূতি বিকলেন মনাসিক্তং
যোতাশ্চ শেষমুদকং পিতরঃ পিবন্তি ॥

(d) তীৰ্থোদকঞ্চ বহিষ্ঠ নাত্ততঃ শুদ্ধিমৰ্হতঃ ।

(e) এষোহহমেহি মামেব ভেজন্তেজসি শাম্যতু ।

(f) কো নাম পাকাভিমুখস্ত জস্তা—
ঈরাণি দৈবস্ত পিধাতুমীয়ে ।

5. (a) Render into Sanskrit :—

হা অজ্ঞউক্ত হা কুমার লখন এয়াইণিং মলভাইণিং অসরণং অরগ্গে আসপন্নসববেয়ণ হদাসঃ
সাবদা মে অহিলসন্তি

(b) Give in simple sanskrit sentences of your own the purport of the following *shloka* :—

(a) স্বমুখনিরভিলাষঃ শিথসে লোকহেতোঃ

প্রতিদিনমথবা তে বৃত্তিরেবং বিধেব ।

অমুভবতি হি মুখ্য পাদপত্নীত্রয়কং

শময়তি পরিতাপং ছায়য়া সংপ্রিতানাম্ ।

6. Translate into Sanskrit :—

Notwithstanding that he is of good character, yet because he has once committed acts of enmity against persons equal in respectability

to religious students, he is said by dull persons to be altogether an embodiment of cruelty. The noble deeds of the celestial river Ganga, such as the nourishing of the universe, the filling of the seven oceans, the delighting of Brahmana and other gods, are reduced to irrelevance by the fault committed on one single occasion, when she touched the ashes of the host of Sagar's sons. Hereby she has become known to the people as fit for the deposition of bones, as if she were a burning ground.

SANSKRIT—PASS

Third Paper

1 Translate any *two* of the following extracts into English :—

(a) অঙ্গরসং কূলে মগিরেতি নারী কন্তকা অভূং। ভক্তাশ্চাসৌ দেবশ্চিত্রেরথঃ পাণিম-
গ্রহীৎ। তয়োঃ কালেন হুহিত্বরত্নমুপাদি কাদম্বরীতি নারী। সা চ মে জন্মতঃ প্রভৃতি পরমং
প্রেমস্থানম্। সা চ অমুনা মদীরেন বৃত্তাস্তেন সমুপজাতশোকো শিরমকাৰীং—নাহং কথঞ্চিদপি
সশোকায়ং সখ্যাম্ আশ্বনঃ পাণিঃ গ্রাহয়িত্বাশীতি।

(b) রাজপুত্র! রমণীয়ে হেমকূটঃ, চিত্রা চ চিত্ররথরাজধানী, সরলজলয়া মহামুখাবা চ
কাদম্বরী। যদি নাতিখেলকরমিব গমনং কলয়সি। নাবসীদতি গুহ্য প্রয়োজনং, ততো নাইসি
নিষ্কলতাং কর্তুমিমাংসবার্থনাম্। ময়ৈব সহ গত্বা হেমকূটং তত্র দৃষ্ট্বা চ কাদম্বরীম্ একমহো বিশ্রাম্য
প্রত্যাগমিষ্যসি।

(c) তদন্ত বিনয়ায় ইদং সৰ্বং ময়া কৃতম্। অধুনা তু তৎ কৰ্ম সমাপ্তম্। শাপাবসানসময়ে
বতন্তে। শাপাবসানে যুবরোঃ সময়েব স্তথেন ভবিতব্যম্ ইতি স্বতঃসমীপমানীতো ময়া অয়ম্।
যজ্ঞাঙ্কালজাতিঃ খ্যাপিতা, নমোকসম্পর্কপরিহারায়। ইত্যভিধখানেব সা ক্ষিত্তেৰ্গগনম্ উপপতম্।

2. (a) Decline গতি, পতি, যতি, and মতি in প্রথম, দ্বিতীয়, and চতুর্থী respectively.

(b) Derive all the words of the following sentence, and conjugate the roots thus found in লোট্ৰ third person singular—

বাহু অন্নং ভোক্তুমিচ্ছা জাতা।

(c) Substitute single word for any *six* of the following :—ভবিতুম্ ইচ্ছতি, পুনঃ পুনর্ভবতি, গোঃ ইদম্, অগ্রে ভবম্, শিবন্ত অপত্যং স্ত্রী, রাজঃ কর্ণ, জনানাং সমূহঃ, and ইন্দ্রো দেবতা অস্তাঃ।

(d) Form as many *samasas* as are possible in the following sentence —

অতিথিরসৌ অস্তমিন্ গৃহে সৰ্বাং রাজিঃ বাপরিষা প্রাতঃ ত্রিঃ সখ্যায়বলোকা পরমাঃ
ঐতিমাসাদ।

(e) Correct all the errors in the following extract—

কচিৎ গ্রামে কাচিং কুবকদম্পতী নিবসতি স্ম। একদা বনে কাষ্টং সংহীত্ব। আগচ্ছতী কুবক-
পত্নী ব্যাঘ্রেনধৃতবতী আত্মপ্রাণং রক্ষিতুং নাশক্যং।

3. (a) Write what you know about any *two* of the following authors—Jaimini, Ramanuja, Somadeva and Rudolph Roth.

1928

SANSKRIT—PASS

First Paper

1. On what *three* should *অনধ্যায়* be observed? Distinguish between *সম্ভোতিরনধ্যায়* and *আকালিকানধ্যায়*।

2. Explain any *four* of the following expressions—

কুণ্ডীধাতক, ব্রহ্মসত্র, বেদবিদ্যানাতক, পুঙ্কস, সৌনিক and পক্ষিগীরাতি।

3. Give the substance of Indra's speech to Arjuna in the eleventh canto of the *Kiratarjuniya*.

4. Translate into English *either* of the following groups—

A

(a) তথাপি হিঙ্গঃ স ভবজিগীষয়া

তনোতি শুভ্রং গুণসম্পদা বশঃ।

সমুন্নয়ন্ ভুতিমনার্য্য সংগসাদ বরং

বিরোধোহপি সমং মহাত্মভিঃ ॥

(b) প্রেয়সীং তব সংপ্রাপ্তা গুণসংপদমাকৃতিঃ।

স্বলভা রম্যতা লোকে দুর্লভং হি গুণার্জনম্ ॥

- (c) ভ্রমং ভ্রমমিতি ভ্রমাদ্ ভ্রমমিতোব বা বদেৎ ।
 শুক্লবৈরং বিবাদং চ ন কুৰ্খ্যাৎ কেচিৎ সহ ॥
- (d) আকাশেসাত্ত্ব বিজ্ঞেয়া বালবৃক্ষশাভূরাঃ ।
 ব্রাত্ত জ্যেষ্ঠঃ সমঃ পিত্রা ভাৰ্য্যাং পুত্রঃ বলা তনুঃ ॥

B

- (a) বিধায় রক্ষাং পরিতঃ পরেতরান-
 শক্তিকারমুপৈতি শক্তিঃ ।
 ত্রিঙ্গাপবর্গেবমুজ্জীবিসাৎকৃতা
 কৃতজ্ঞতামন্ত বদন্তি সম্পদঃ ॥
- (b) দুৰাসদানরোমুগ্রান্ ধৃতেৰ্বিধাসজ্জননঃ ।
 ভোগান্ ভোগানিবাহেয়ানধ্যাপন্ন দুর্লভা ॥
- (c) সৰ্ব্বান্ পরিত্যজেদৰ্থান্ স্বাধ্যায়ন্ত বিরোধিনঃ ।
 যথা তথাধ্যাপয়ন্ত সা হস্ত কৃতকৃত্যতা ॥
- (d) বানশয্যাসনান্তস্ত কূপোভানগৃহাণি চ ।
 অদন্তানুপভুঞ্জান এনসঃ স্তাত্ত্ব রীয়ভাক্ ॥

5. Give the substance of the *slokas* in either of the following groups :—

A

- (1) পরবানৰ্হসংসিদ্ধৌ নীচবৃত্তিরপত্রপঃ ।
 অবিধেয়েজ্জিন্নঃ পুংসাং গোঁরিবৈতি বিধেয়তাম্ ॥
- (2) বুদ্ধিবুদ্ধিকরাণ্যাম্ ধন্তানি চ হিতানি চ ।
 নিত্যং শাস্ত্রাণ্যবেক্ষ্যেত নিগমাংশ্চৈব বৈদিকান্ ॥

B

- (a) কোহপবাদঃ স্তুতিপদে যদশীলেবু চকলাঃ ।
 সাধুবৃত্তানপি ক্ষুদ্রা বিক্ষিপন্তোব সংপদঃ ॥
- (b) নাধৰ্ম্মশ্চরিতো লোকে সত্যঃ কলতি গোঁরিব ।
 শনৈরাবত মানন্ত কতুৰ্ম্মলানি কুন্ততি ॥

6. Explain *either* of the following groups :—

A

- (a) शिवश्रिमिता यदियं दशा ततः समूलमूलयतीव मे मनः ।
परैरपर्यासितवीर्यासंपदां पराजबोहप्युत्सव एव मानिनाम् ॥
 (b) न लोकवृद्धं बभेत्तु वृद्धिहेतोः कथञ्चन ।
 अजिह्वामशठां अक्वां जीवेद्वाक्क्षणीविकाम् ॥

B

- (a) ब्रजंति ते मूढविमः पराजबं भवन्ति मायाविषू ये मानिनः ।
 एविञ्च हि ब्रजंति शठान्तथाविधानसंवृताङ्गानि शिता ईवेवयः ॥
 (b) यमान् सेवेत सततं न नितां निरमान् बूधः ।
 यमान् पतताकुर्बाणो निरमान् केवलान् भजन् ॥

7. (a) Account for the case-ending in वृद्धिहेतोः in A (b) under Question 6.

(b) Derive निशित and give the third person singular *lat* form of its root.

(c) Expound the *samasa* in the underlined words in Question 6.

(d) Comment on विशासजग्न in B (b) under Question 4.

8. Answer any *two* of the following :—

(a) एविञ्च कृषासदनं महीभृजा तनाच्छक्तेः मूजसन्निधौ वतः ॥

Does this passage admit of two different interpretations ? If so, what are they ? Give the third person singular *lat* form of the root of आच्छक्ते ।

(b) वितरति केममदेवमातृकाशिराय तस्मिन् कुरवचकासति ॥

Explain the expression अदेवमातृका and give a proper synonym for it. Parse तस्मिन् ।

(c) इति त्राज्ये भवे भव्या मुक्तावन्तिर्गते जनः ॥

To what does इति refer ? Derive भव्या and write a grammatical note on उन्तिर्गते ।

(d) নাম বভাভিনন্দিত্তি বিবোধিপি ন পুমান্ পুমান্ ॥

What is the difference in meaning between the two পুমান্? Derive the base of the word বিবোধি and conjugate its root in *lan* (third person singular).

9. Translate into Sanskrit :—

In right royal attire and accompanied by his army, the king entered the city which was rendered auspicious by the blessings uttered by the citizens, while there poured a rain of parched grains from its mansions as a greeting. While he, who was free from passions, occupied the great throne, no calamity came over his subjects either from the gods or from men. The heart of this king who had pacified the sense was captivated by the forest regions with their beautiful mountain slopes and their heights round which the birds never cease lying.

SANSKRIT—PASS

Second Paper

1. Describe in detail the arrangement of the plan which eventually brought about the reunion of Sita with Rama and the recognition of his twin sons, in the last act of the *Uttaracharita*.

2. Summarize the incidents narrated in the *Abhijnana Sakuntalam* about the arrest by the police of the fisherman and the recovery of the lost ring.

3. Bring into prominence the fundamental thoughts contained in any two of the following extracts :—

(a) ঔৎসুক্যমাত্মবিসাদয়তি প্রতিষ্ঠা

ক্লিষ্টাতি লক্ষপরিপালনশক্তিরেব ।

নাতিশ্রমাপনয়নায় যথাক্রমায়

রাজ্যং বহুতুতলগমিষাতপত্র ॥

(b) উদেতি পূর্বাং কুহ্মং ততঃ কলং

যনোদয়ঃ প্রাক্ তদনন্তরং পরঃ ।

নিমিত্ত-নৈমিত্তিকমোরয়ংক্রম-

স্তব্ধপ্রসাদস্য পুরস্ত সম্পদঃ ।

(c) ভূয়সা জীবধর্ম এব যত্রসময়ে কস্যচিৎ কচিৎ ঐতি: যত্র লৌকিকানামুপচারস্তারমৈত্রকং
কুরাগ ইতি; তমপ্রতিসম্ভোয়মনিবন্ধনং প্রমাণমাননন্তি ।

(i) Account for the cerebral ৰ in প্রতিষ্ঠা and the fourth case-ending
১ অমাপনরনায় in extract (a).

(ii) Derive পুরঃ and give its alternative form, if any. Decline
the case of সম্পদঃ in nom, singular and dual, in extract (b).

(iii) Parse উপচারঃ and চকুরাগঃ in extract (c). Derive তারমৈত্রকম্,

4. Translate into English either of the following groups, referring
to the contexts in each case :—

GROUP A

(a) লীলোৎখাতমুণালকাণ্ডকবলচ্ছেদেব সম্প্রতিতাঃ

পুত্রং-পুত্ররবাসিতস্য পরসো গণ্ড বসংক্রান্তয়ঃ ।

সেকঃ শীকরিণা করেণ বিহিতঃ কামং বিরামে পুনঃ

যং স্নেহাদনরালনালনলিনীলীলাতপত্রং ধৃতম্ ॥

(b) ত্রিশ্রোতসং বহতি যো গগনপ্রতিষ্ঠাং

জ্যোতীংষি বর্ডয়তি চ প্রবিভক্তরশ্মিঃ ।

তস্য ব্যপেতরজসঃ প্রবহস্য বায়োঃ

মার্গো দ্বিতীয়হরিবিক্রমপূত এব ॥

GROUP B

(a) মন্যেবমশ্রয়ণদারুণ চিন্তবৃত্তী

বৃত্তং রহঃ শ্রয়ণমপ্রতিপত্তমানে ।

ভেদাদ্ভ্রবোঃ কুটিলমোরতিলোহিতাক্ষা

ভগ্নং শরাসনমিবাভিলাষা স্রস্ত ॥

(b) দন্তেভ্রাভয়দক্ষিণৈর্ভগবতো বৈবস্বতাদমনো

দৃষ্টানাং দহনায় দীপিতনিক্রতপ্রতাপাগ্নিভিঃ ।

আদিভৌবদি বিগ্রহো নৃপতিভিন্নং মমৈতৎ ততো-

দীপ্রাশ্রয়রূপাদীধিতিশিবানীরাজিতজ্যং যতুঃ ।

(a) কুশিকমৃতমথষিবাং প্রমাথে

যতমযুবাং রঘুনন্দনং স্মরামি ।

(b) ত্রীরস্বতীরপরা প্রতিভাতি সা মে

ধাতুর্বিভূষমুচিস্তা বপুশ্চ তস্তাঃ ।

(i) In extract (a), do you find any irregularity in the form যতমযুবাং ?
If so, how would you justify ?

(ii) In extract (b), point out the real *agent* of the gerundial form অমুচিস্তা to which it must be an adjunct. Cite, if possible, from your texts, another example of the similar use of gerund.

6. Render into prose the following, using words other than those in the text as far as possible—

কৃত্যরোভিন্নদেশত্বাং বৈবীভবতি মে মনঃ ।

পুরঃ প্রতিহতং শৈলৈঃ শ্রোতঃ শ্রোতোবহাং যথা ॥

7. Give the substance of any *two* of the following extracts *either* in English *or* in your own vernacular—

(a) সহজে কিল জে বিনিমিলিবে, ন হ সে কল্প বিবজ্জগীঅয়ে ।

(b) মহার্যস্তীর্থানামিব হি মহতাং কোপোৎপ্যাতিশয়ঃ ।

(c) ভিদ্ধ্যোতে বা সম্ভৃতমীদৃশস্য নির্দোষণ্য ?

(d) অহো সর্বাস্ববস্থাস্থ রমণীয়কমাকৃতিবিশেষাণাম্ ।

8. Translate into Sanskrit—

Every Aryan boy in India was taken away from his parents at an early age, and lived the hard life of an anchorite under his teacher for twelve or twenty four or thirty-six years, before he entered the married life and settled down as a householder. Every Aryan boy assumed the rough garment of a student, lived as a mendicant and begged his food from door to door, and thus trained himself in endurance and suffering as well as in the traditional learning of the age, before he became a householder.

SANSKRIT—PASS

Third Paper

1. Translate any *two* of the following extracts into English—

(a) নীলপটবৎ প্রসারিতো ধরণীবক্ষসি দৃশ্যতে অস্তোষিঃ, স্বীপাশ্চাত্তরাস্তরা মনীষিন্দুবধিতাস্তি । গিরেরপরয়োঃ পার্থোযোরূপতাকাস্থ জামলা তরুরাজিরপি নানাকুহুমৈকুন্ডাসিতা বিচিত্রশাটব গিরিগাট্রে স্থবিত্তাসমান্তে । ধন্যং প্রকৃতিদেব্যা রচনাকৌশলম্ ।

(b) তেন পিচ্ছিলেন পথা সৌপানাবলীসহিতেনাধোমুখং ত্রীন চতুরো বা হস্তান্ অবতীৰ্য্য পুরঃ পুরো তৎকরহৃদ্বক্ষীণদীপালোকেন কথঞ্চিদবলোকিতং কুণ্ডম্ । চতুর্হস্তমিতং তুরপ্রমিধং কুণ্ডং সদা বহতি বক্ষসি দারুণং বাড়ববহ্নিম্ । মুহমুর্ছনিরৈতি জলং ভিদ্ধাহস্য দীপ্তা শিখা গচ্ছতি চ মুহরদর্শনম্ ।

(c) এবিশ্ব চাবতরণমার্গমবলোকা কটকিতং শরীরম্, অত্র তমসো বিরাজতে চিররাজহং নাস্তি তত্রিপোন্দ্রিল্লিরচনাবধি অবশোধিকারঃ তত্রাপি চ হস্তমাত্রপরিসরে সর্বাণতমমার্গে বর্ততে মহান্ জনসমূহঃ অবশোধোৎসুকো নির্গমোৎসুকঞ্চ ।

(d) এবিশ্ব কষ্টেনাস্মাভিঃ প্রথমমবলোকিত একঃ প্রকোষ্ঠঃ । তত্র খট্টামাত্র চ তিষ্ঠতি মোহান্ত ইত্যাত্মতীর্থগুরুঃ । এতৎপদাধিষ্ঠিতানাং পূৰ্ব্বমত্র মহান্ প্রতাপ আসীৎ ! অতিক্রান্তে প্রথমে দ্বিতীয়ে চ প্রকোষ্ঠে । প্রাপ্ততৃতীয়প্রকোষ্ঠঃ তত্র লোহশলাকায়ুতিমধ্যে বিরাজতে দেবদেবঃ । যুতের্বহিঃ স্থিতৈরত্র প্রসার্য হস্তস্পর্শনং কার্য্যম্ ।

2. (a) Decline the base of the following *four* words in প্রথমা, দ্বিতীয়া, তৃতীয়া, and চতুর্থী *respectively*.

তস্ত এতৎ কর্শ্ব শ্রেয়ঃ ।

(b) Derive all the words of the following sentence, and conjugate the roots thus found in লঙ, third person singular—

বিতার্জনপরিশ্রমঃ প্রশংসনীয়ঃ ।

(c) Substitute single words for any *either* of the following—

ষাভুমিচ্ছতি, পুনঃ পুনঃ দীপাতে, স্বথমমুত্তবতি, গঙ্গায় ইদম্, স্ববর্ণস্ত বিকারঃ, সমাজে সাধুঃ, হেমন্তে ভবম্, মাসেন নিবর্ত্তম্, মনোরপতাং পুমান্, পুরাণং বেত্তি, নারদেন শ্রোক্তম্ ।

(d) Explain the compounds in the following sentence.—

গুভাহে মহারাজঃ অষ্ট্রয়নাঃ সশিষ্যো গৃহনির্গত আসম্ ।

(e) Correct all the errors in the following sentence :—

ভগবানেন সৃষ্টে অগ্নি জগতে পাপকর্মাং জনানাং নিবৃন্তি ন ভবতি ইতি চিন্তয়ন্ মম মনে
ব্যথা জাতবান্ ।

3. (a) Write what you know about any *two* of the following authors :—Amarasimha, Aryabhatta, Brihaspati, Sir William Jones.

(b) Write short notes on any *two* of the following works :—*Kavya-prakasa*, *Naishadha-charita*, *Amaru-sataka*, *Niti-manjari*.

(c) *Either*, On what points do sanskrit dramas resemble the dramas of Shakespeare ?

Or, What distribution of dialects is usually adopted for actors of various ranks in Sanskrit dramas ?

(d) Give a short account of the Yoga system of the Hindu philosophy.

1929

SANSKRIT—PASS

First Paper

1. Translate into English *two slokas* from each of the following groups :—

GROUP A

(a) নিসর্গদ্বৈবোধমবোধবিক্রবাঃ

ক ভূপতীনাং চরিতং ক জন্তবঃ ।

তবানুভাবোহরমবেদি যন্মরা

নিগূঢ়ত্বং নয়বন্ধ বিদ্বিবান্ ।

(b) অথ ক্রমামেব নিরন্তরিক্রম-

স্তিরায় পর্বেষি স্তম্ভস্ত সাধনম্ ।

বিহার লক্ষ্মীপতিসম্ন কামুর্কং

জটায়রঃ সঙ্কল্লীহ পাবকম্ ॥

(c) অগ্নেনয়মুদেতুমিচ্ছতা

তিমিরং রৌবময়ং থিরা পুনঃ ।

অবিভিক্ত নিশাকৃতং তমঃ

প্রভয়া নাক্রমতাপ্যদীয়তে ॥

GROUP B

(a) কার্যং সৌহবেক্ষ্য শক্তিং চ দেশকালৌ চ তত্ত্বতঃ ।

কুরুতে ধর্মসিদ্ধার্থং বিশ্বরূপং পুনঃ পুনঃ ॥

(b) ইন্দ্রিরাণাং জয়ে যোগং সমাভিষ্ঠেদ্বিধানিশম্ ।

জিতেন্দ্রিয়ো হি শক্নোতি বশে স্থাপয়িতুং প্রজাঃ ॥

(c) রাজ্ঞশ্চ দহ্মস্বাক্ষারমিতোবা বৈদিকী শ্রুতিঃ ।

রাজ্ঞা চ সর্ববোধেভ্যো দাতব্যমপৃথগঞ্জিতম্ ॥

(d) আয়ত্তিং সর্বকার্য্যাণাং তদাত্তং চ বিচারয়েৎ ।

অতীতানাং চ সর্বেষাং গুণদোষৌ চ তত্ত্বতঃ ॥

2. (a) What is the significance of the use of the two ক's in A (a) ?

How does Mallinatha explain the words নয়বস্ম ?

(b) Write grammatical notes on the words অমৃতাব and জটধর

(c) Comment on the কর্মধ্ব in পাবকম্ in A (b).

(d) Use a single word for উদেতুমিচ্ছতা in A (c).

(e) Explain the samasa in ধর্মসিদ্ধার্থম্ in B (a).

(f) Change the voice of B (b).

3. Refer to the context and elaborate in English the thoughts contained in any two of the following extracts :—

(a) সদানুকুলেষু হি কুর্বতে রতিং নৃপেষমাতোষু চ সর্বসম্পদঃ ॥

(b) নমু বক্তবিশেষনিঃস্পৃহা গুণগৃহা বচনে বিপশ্চিতঃ ॥

(c) বিধিহেতুরহেতুরাগসংগাং বিনিপাতোহপি সমঃ সমুন্নতেঃ ।

Give a suitable synonym for বিপশ্চিতঃ and account for the case-ending s in the underlined words.

4. (a) অমর্ষশূন্তেন জনস্ত জন্তনা ন জাতহাদেন ন বিধিবাদয়ঃ ।

Parse করুন। How can you break the expression বিধিবাদয়: in two ways? Mention Mallinatha's view about it.

(b) কথা এসঙ্গেন জনৈরদাহিতাত্তবানান্দ ব্যাখ্যতে নতানতঃ।

Annotate.

5. Explain any two of the following *slokas* :—

(a) বকবচ্চিস্তয়েদর্ধানং সিংহবচ পরাক্রমেণ।

বৃকবচ্চাবলুপ্তেত শশবচ বিনিস্পতেৎ ॥

(b) আসনং চৈব যানং চ সজ্জি বিগ্রহমেব চ।

কার্যং বীক্ষ্য প্রযুক্তীত দ্বৈধং সংশ্রয়মেব চ ॥

(c) পার্শ্বগ্রাহং চ সংশ্রেক্য তথাক্রমং চ মণ্ডলে।

মিত্রাদিথাপ্যামিত্রাষা যাত্রাকলমবাপ্ত য়াৎ ॥

6. Answer any one of the following :—

(a) Give the substance of Manu's arguments in favour of (i) the infliction of punishment (দণ্ডপ্রণয়ন) and (ii) modest behaviour (বিনয়) of the king.

(b) Enumerate the vices arising from love of pleasure (কামজ) as well as from anger (ক্রোধজ). Which of them are most pernicious?

(c) Write a short note on the rules of warfare to be observed by the king. What are the constituent elements (প্রকৃতি) of a *mandala*?

7. Translate into Sanskrit :—

Lakshmana urged daily : 'So much has been achieved. Since further enterprises are useless at this bad season, our return recommends itself and would not cause disgrace. Subsequently, when the season at the commencement of the autumn, turns favourable, we shall in fresh strength take up the enterprise and by a full effort carry it to a successful conclusion.' This recommendation was not accepted by the king nor by the ministers about him, full of deceit as they were.

SANSKRIT—PASS

Second Paper

1. Either, From the description given of the hermitage of কণ্ঠ (Kanva) in the first act and from what can be learnt about the hermitage

of মারীচ (Maricha) as described in the seventh act of the *Alhijana-Sakuntala*, state what strike you as the most distinctive features of the two places. Substantiate your views by quotations from, or references to, the text.

Or, Bhavabhuti is superior to other Indian dramatists in the delineation of those softer and deeper emotions which enter into our everyday life. Justify this claim by references to the appropriate texts.

2. Translate into English either of the following groups, but not both :—

Group A

- (a) নিষ্কৃতিমিতাঃ কচিং কচিদপি প্রোচুসদৃশনাঃ
 স্বেচ্ছাস্থগতীরভোগভুজগম্যসাদীপ্তায়মঃ ।
 সীমানঃ প্রদরোদরেবু বিলসংসম্মানসো বা স্বয়ং
 তৃপ্তিঃ প্রতিবৃথাকৈরভগরস্বেদত্রবঃ পীয়তে ॥
- (b) ভবন্তি নদ্রান্তরবঃ কলাগমৈ—
 ন বাস্তুভিদু রবিলম্বিনো ঘনাঃ ।
 অমুক্ততাঃ সংপূৰ্ণাঃ সমৃদ্ধিঃ ।
 স্বভাব এবৈব পরোপকারিণাম্ ॥

Group B

- (a) চূতানাং চিরনির্গতাপি কলিকা বদ্রান্তি ন স্বয়ং রজঃ
 সন্নকং বদপি স্থিতং কুবকং তৎকোরকাবস্থয়া ।
 কঠেবু স্থলিতং গতেহপি শিশিরে পুংস্কো কিলানাং রুতং
 শব্দে সংহরতি আরোহপি চকিতভূগাঙ্কিষ্টৈঃ শরম্ ॥
- (b) ভ্রমিষু কৃতপটাস্তম'ওলাবৃত্তচক্ষুঃ
 প্রচলিতচতুরঙ্গতাণ্ডেবম'ওয়ন্তা
 করকিসলয়তালৈমু'ক্ষা নৃত্যমানা
 স্তম্ভিব মনসা তাং বৎসলেন স্মরামি ॥
3. Either, বজ্রাদপি কঠোরাণি মুহুনি কুহুমাদপি
 লোকোত্তরাণাং চেতাযসি ।

Make good this claim by mentioning some of the actions of Rama as given in the *Uttaracharita*.

Or, Explain clearly—

অকিঞ্চিৎপি কুর্বাণঃ সৌধৈর্দুঃখাত্তপোহতি ।

তন্তুত্ব কিমপি ত্রব্যং যো হি যন্ত ত্রিয়ো জনঃ ।

Parse ত্রব্যম্ in the above. State why the demonstrative pronoun ত্ব is used instead of সঃ. Give the force of the negative particle অ in অকিঞ্চিৎ. Is it rightly used here ?

4. Elaborate the idea contained in any *three* of the following extracts :—

(a) উৎসর্গিণী খলু মহতাং প্রার্থনা ।

(b) নমু প্রবাত্তেহপি নিরুপমা গিরয়ঃ ।

(c) অহেতুঃ পক্ষপাতো যন্তুত্ব নাস্তি প্রতিক্রিয়া ।

(d) সানুযজ্ঞাণি কল্যাণাণি ।

(e) ভৃগাঃ পূজাহানং ভৃগিষু ন চ লিঙ্গং ন চ বয়ঃ ।

5. What have you learnt from the perusal of the two dramas about the following subjects ?—

(a) Dignity of labour or occupation.

(b) Law of inheritance.

(c) Law of punishment for theft.

(d) Value of public opinion.

(N. B.—Answer any Two only.)

6. Bring into prominence the fundamental thoughts contained in any *two* of the following extracts :—

(a) দর্পেণ কোতু কবতা মগ্নি বজ্রলক্ষ্যঃ

পশ্চাৎলৈরনুসৃতোহয়মুদীর্ণধ্বা ।

বৈধা সমুদ্রতমস্কললললল

মেঘত্ব মাঘবতচাপধরত্ব লক্ষ্মীম্ ॥

(b) অন্তঃকরণতত্ত্বত্ব দম্পত্যোঃ মেহসংশ্রাৎ ।

আনন্দগ্রহিণীকোহয়নপত্যমিতি কথ্যতে ।

(c) বাতোকতোহন্তশিখরং পতিরোবধীনা-

মাবিকৃতারশপুরঃসর একতোহর্কঃ ।

ভেক্রোষরন্ত যুগপদ্যানোদয়াভাং

লোকো নিয়ম্যত ইবৈব দশান্তরেণ ॥

(i) Comment on উদীর্ণধবা grammatically.

(ii) Derive অপত্যং, and state what the term অন্তঃকরণতত্ত্ব means.

(iii) Account for the cerebral ব in আবিকৃত and give the meanings of ব্যসন as a technical word,

7. চিরং ধাষা নিহিত ইব নির্দায় পুরতঃ ।

প্রবাসেহস্তাচাসং ন খলু ন করোতি প্রিয়জনঃ ।

Point out the real *agent* of the gerundial form নির্দায়. Cite another example of the similar use of the gerund from the text.

8. Translate the following extracts into English :—

(a) জখ্ অণ্ডাবলোহরগমন্তপরিসেসধূসরসিরো মূলং মূলন্তো তুএ পরদিএণ অবলম্বিতো
উরুঅলে অজ্ঞউত্তো আলিহিতো ।

(b) ভো তকেসি জা এসা সিচিলবক্কুসন্তকুহ্মেণ কেশন্তেণ উবত্তিগসেঅবিন্দুণা বদণেণ
কুদপাদবস্ তলে ঈসিপরিস্ সন্তা বিঅ অলিহিতা এসা তন্তখেদো সউত্তলা ।

9. Translate into Sanskrit the following extracts :—

(a) Journeying one day in the forest she saw a tall, strong young man. There was something about him that made her hold her breath. Across one shoulder he carried an axe, and in his other hand he held a bundle of faggots. He was evidently a forester. Yet his bearing spoke of courage and gentleness, and told of high breeding and great gentleness of heart.

(b) All this time Mandodari, the wife of Ravana, had been imploring her husband to set his prisoner free. But he had answered only with expressions of contempt for Rama, and boasts of his own power.

SANSKRIT—PASS

Third Paper

Group A.

1. Translate any *two* of the following extracts into English :—

(a) ততোহক্ষকারণে মলিনসে নভসি পাপভয়াদিব পশ্চিমপয়োনীধৌ ময়েমাত্ৰমণ্ডলে মহামায়াভবনং প্রাপ্য ভোজমুবাচ বত্সরাজঃ । কুমার ভূতানাং দৈবত. জ্যোতিঃশাস্ত্রপারজভেন কেনচিৎ ত্রাঙ্কণেন তব রাজ্যাপ্রাপ্তাবুদীৰিতায়াং রাজ্ঞা ভববধঃ সমাদিষ্টে ইতি । ভোজ উবাচ ।

রামে প্রব্রজনং বলেনিয়মনং পাণ্ডোঃ সূতানাং বনং

বৃক্ষীণাং নিধনং নলশ্চ নৃপতেঃ রাজ্যাত্‌পরিব্রংশনন্

কারাগারনিবেশণং চ মরণং সক্ষিস্ত্য লঙ্কেশ্বরে

সর্বঃ কালবশেন নশ্ততি নরঃ কো বা পরিভ্রায়তে ॥ ইতি ।

(b) ততো মুহুর্তে কোহপি কৌশেয়কৌপীনো মুর্ধ্বমাংশচ্ছূড় ইব কাপালিকঃ সমাগতঃ ! তং বীক্ষ্য বুদ্ধিসাগরঃ প্রোবাচ । যোগীজ্ঞ কৃত আগম্যতে । কাপালিকে ভবতি কঃ প্রভাব-বিশেষ ইতি । কাপালিকোহব্রবীৎ । অস্ত্রাকং নৈকো নিবাসঃ সকলভূমণ্ডলং ভ্রাম্যঃ । গুপ্তদেশে ভিষ্ঠামঃ । নিখিলং ভূবনতলং করতলামলকবত্পশ্যামঃ । সর্পদষ্টং, রোগগ্রস্তং, শস্ত্রভিন্নশিরস্কং, তৎক্ষণাদেব বিগলিতসকলসম্ভাপং কুর্ম ইতি । রাজাপি কুডাস্তহিত এব শ্রুতসকলবৃন্তাস্তঃ সত্যগৃহমাগতঃ কাপালিকং দণ্ডবৎপ্রণম্য মাং রক্ষেতি প্রার্থয়ামাস ।

(c) ততো রাত্রৌ গুচ্ছরূপেণ ভোজোহপি নদীপুলিনে নীতঃ । যোগিনা ভোজে জীবিত ইতি চ বাক্ত্বা লোকেষু প্রসূতা । ততো গজেশ্বাধিক্রমো বশিষ্ঠিঃ স্মরমানো ভৈরবদ্বাদি নিনাদেন দিশো বধিরয়ন্ পৌরীষামাত্যপরিব্রূতো ভোজরাজো রাজভবনমগম্য । রাজা শিতরমালিক্স্য প্রারোদিত । ভোজোহপি রাদস্তং মুগ্ধং গ্যবারয়ন্ । ততঃ সন্তপ্তো রাজা ভোজং সিংহাসনে নিবেশ্য স্বপুত্রৈভ্য এতৈকং গ্রামং দষ্ট্য পরমপ্রেমাস্পদং জয়ন্ত্য ভোজসন্নিধৌ স্থাপয়ামাস । পর-লোকং কাক্কন্ মুগ্ধঃ সহরাজ্ঞীভিত্তপৌবনং গষ্ট্য পরং তপস্তপে । ভোজশ্চ বুদ্ধিসাগরঃ মুখ্যামাত্যং বিধায় রাজ্যং বভূজে ।

2. (a) Distinguish between any *three* of the following :—আচার্য্যানী and আচার্য্যা, যবনানী and যবনী, রাজধানী and রাজবান্ ; মাসমধীতে and মাসেনাধীতে ।

(b) Expound the *samasas* in any *four* of the following compounds .—
জ্বলোপেতঃ, পুরুষব্যাহ্রঃ, কৃতাকৃত্য, কাপুক্ষ্যঃ, অতিমালঃ and দম্পতী ।

(c) Give the feminine forms of any *four* of the following :—लघु, विबध्, मयबन्, मन्त्र, and वृद्ध ।

(d) Substitute single words for *six* of the following :—

पातुमिच्छति, पितेव आचरति, अस्तिकं, करोति, चन्द्रशेखरं, आयुर्धनं जीवति, दूतश्च भावः, मेधा अस्त्रास्ति, अयमेवामतिशयेन प्रियः, प्राक् भवः ।

3. (a) Conjugate *five* of the following roots :—आप् and ग्रह् in लङ् third person singular, अद् in लङ् second person singular, भृ in लोटि first person plural; हन् in लोटि second person singular; भृज् (to protect) in लट् second person plural; and वस् in लिटि third person singular.

(b) Decline *five* of the following bases :—दिब् and प्राच् in nominative singular; दिब् and सन्नन् in instrumental singular; भास् and अण् in dative singular; and दोष् and अहन् in locative singular.

4. (a) Correct all the errors in the following sentence :—

गृहस्थ परित्रः शिशवोऽप्यङ्गीकृति मोदकं तेषां रोचते अत्रागच्छा तान् मोदकं ददौ ।

(b) Distinguish between *samahara dvigu* and *samahara dvandra* compounds. Give *one* example of each.

Group B

(Only *THREE* questions to be attempted.)

1. Discuss the date of the *Ramayana*.

Give a brief account of two of the Sanskrit historical *Kavyas* and mention their authors.

3. Write notes on any *five* of the following :—Yasatilaka, Vatsabhati, Hala, Nāṭyaśāstra, Haravijaya, Gaudavaha, Sankha, and Setubandha.

4. Trace the history of the migration of Indian fables into the Western world.

5. State in brief what you know of the *Bṛhatkatha* and other later recasts of this work.

1930

SANSKRIT—PASS

First Paper

1. Translate into English *either* of the following groups of *slokas*:—

Group A

- (a) ক্রিয়ান্ত যুগৈর্নৃপ ! চারচক্ষুৰো
ন বৰুণীয়াঃ প্রভবোহমুজীবিভিঃ ।
অতোহহসি কুন্তমসাধু সাধু বা
হিতং মনোহারি চ দুর্লভং বচঃ ॥
- (b) শ্রুতমপ্যাধিগম্য যে রিপূন্
বিনয়ন্তে ন শরীরজগ্মনঃ ॥
জনয়ন্ত্যচিরায় সম্পদাম্
অযশস্তে খলু চাপলাশ্রয়ম্ ॥
- (c) তন্মাক্ষৰ্ণং যন্মিঠৈবু স ব্যবস্তেন্নরাধিপঃ ।
অনিষ্টং চাপ্যনিষ্টেবু তং ধৰ্ম্মং ন বিচালয়েৎ ॥
- (d) যতশ্চ ভয়মাশঙ্কন্ততো বিস্তারয়েষ্বলম্ ।
পদ্মেন চৈব ব্যুহেন নিবিশেত সদা স্বয়ম্ ॥

Group B

- (a) পরিক্রময়েৎ হিত চক্ষনোচিতঃ
পদাতিরন্তগ্নিগিরেণুগ্নবিভিঃ ।
মহারথঃ সত্যধনস্ত মানসং
দুৰ্নোতি নো কচ্চিদয়ং বৃকোদয়ঃ ॥
- (b) অসমাগিতকৃত্যসম্পদাং
হন্তবেগং বিনয়েন তাবতা ।
প্রভবন্ত্যভিমানশালিনাং
মদমুত্তমভিভুং বিভূতয়ঃ ॥

- (c) स विद्मन्तु कृतोर्बु निगृह्णितचेष्टितैः ।
 आकारमिद्विभक्तं चेष्टां कृतोर्बु च चिकीर्षितम् ॥
- (d) यदा प्रकृष्टा मञ्जुत सर्वास्त प्रकृतीभूतम् ।
 अतुच्छित्तं तद्विद्वान् तदा कूर्वात विग्रहम् ॥

2. (a) Derive चार and निगृह् ।

(b) Account for the *atmanepada* in विनयस्ते in A (b) and निविशेत् in A (d).

(c) Comment on the *samasa* in शरीरजन्मनः in A (b) and अङ्गुगिरि in B (a).

(d) How does Mallinatha explain the significance of the adjective सत्यधनञ्ज in B (a) ?

(e) Derive व्याचष्टे and give the second person singular *lot* form of its root.

(f) Quote or Give in Sanskrit the substance of the *sloka* to which *sloka* (b) is intended as an answer.

(g) Change the voice of B (d).

3. Expand the idea contained in any two of the following extracts :—

- (a) समुत्पन्नं भूतिमनार्थसंगमाद् वरं
 विरोधोऽपि समं महाशक्तिः ।
- (b) प्रशमात्तरणं पराक्रमः सनयापादितसिद्धिभूषणः ।
- (c) शरद्व्रजलाचलेज्जिह्वैरमूरका हि बहल्लाः क्षियः ॥

Explain the *samasa* in the underlined expression. Parse चलैज्जिह्वैः in (c). State with reasons whether वृत्ति can be used here.

4. Refer to the context and explain either of the following *slokas* :—

- (a) पुरोपनीतं नृप ! रामनीयकः
 विज्ञातिशेषेण यदेतदक्षसा ।
 तदन्तं ते वस्तुकलाशिनः परं
 पुरैति कर्ष्यं वशसा समं वपुः ॥

(b) किमसाधयिकं विवक्षता

मनसः कोऽभ्युपनिषत्सः ।

• क्रियते पतिव्रतकैरपां

भवता धीरतयाऽधरीकृतः ॥

5. Annotate :—

(a) तैः सार्द्धं चिन्तयेन्मित्रां साम्राज्यं सखिविग्रहम् ।

हानं समुदयं क्षुण्तिं लक्षप्रशमनानि च ॥

(b) सह सर्वाः समुत्पन्नाः असमीक्यापदो भूषन् ।

संयुक्तांश्च विमुक्तांश्च सर्वोपायान् श्रेष्ठेषु च ॥

6. Either, Explain the following terms :—

बराहबूह, पार्श्विग्रह, षष्ठद्वर्ग, and उकार ।

Or, Write a short note on the king's *mantra* with special reference to the persons to be kept out of it.

7. Translate into Sanskrit :—

(a) Fie upon the throne on whose account fathers and sons mutually distrust each other and can nowhere sleep quietly at night.

(b) When the king in this evil plight was showering money about everywhere, even artisans and carters took up arms.

(c) The king did not reflect upon this and every day discussed openly the defects of his servants' descent, conduct, personal appearance, and the like.

(d) Unable to offer resistance he then sent the princes into the castle, and then followed them himself next day.

SANSKRIT—PASS

Second Paper

1. Either, Explain clearly the different stages in the development of Dashyanta's love for Sakuntala with proper quotations to justify your statements.

Or, Compare or contrast Bhavabhuti and Kalidasa as poets and dramatists with apt quotations from *Sakuntala* and *Uttarharita*.

2. Translate into English either of the following groups, but not both :—

Group A

- (a) অভিজনবতো ভৰ্জুঃ ন্যায়ো হিতা গৃহীণীপদে
 বিভবগুরুভিঃ কৃত্যৈরস্ত্র প্রতিক্ষমাফুলা ।
 তনয়মচিরাং প্রাচীবার্জং প্রনয় চ পাবনং
 মম বিরহজাং ন ত্বং বৎসে শুচং গণয়িত্বসি ॥
- (b) তটস্থং নৈরাশাদপি চ কলুবং বিশ্রিয়বশাদ্
 বিয়োগে দীর্ঘেশ্মিন্ ঝটিতি ঘটনোত্তীর্ণতমিব ।
 প্রসন্নং সৌজাত্যাদয়িতকরুণৈর্গাঢ়করণং
 অবীভূতং প্রেমণা তব হৃদয়মগ্নিন্ ক্ষণ ইব ॥

Group B

- (a) কিসলয়মিব মুগ্ধং বন্ধনাধিপ্লবং
 হৃদয়কুহুমশোভী দারুণো দীর্ঘশোকঃ ।
 ম্পয়তি পরিপাণ্ডু ক্ষামমস্তাঃ শরীরং
 শরদিজ ইব ঘর্মঃ কেতকীগর্ভগজম্ ॥
- (b) স্তম্ভু হৃদয়াং প্রত্যাদেশব্যলীকমপৈতু তে
 কিমপি মনসঃ সম্মোহো মে তদা বলবানভূং ।
 অবলতমসামেবংপ্রায়াঃ শুভেযু হি বৃত্তয়ঃ
 প্রজমপি শিরস্ত্রকঃ কিণ্ডাং ধুনোতাহিশকরা ॥

3. Quote from your memory one *sloka* from *Sakuntala* and one from *Uttaracharita* which appeal to you for their poetic excellence.

4. Write full grammatical notes on any four of the underlined words in the following passages :—

- (a) নিবেষতে শ্রান্তমনা বিবিভং
 (b) রাত্রিশিবং গন্ধবহঃ প্রবাতি ।
 (c) শক্যোহরবিম্বমুরভিঃ.....আলিঙ্গিতুং পবনঃ ।
 (d) নুমোদ্যাক্যং প্রশাস্তহে ।
 (e) সৌহৃদ্যপুংপুংগামামিমাং ।

5. It is said that Kalidasa's plot of *Abhijnanasakuntalam* differs from the plot of the story of Sakuntala in the *Mahabharata*. What are these points of difference? Discuss whether and to what extent Kalidasa's adaptation of the story of Sakuntala contributed to the superiority or inferiority of *Abhijnanasakuntalam* as the drama.

6. It is said that কালিদাসস্য সৰ্বথঃ অভিজ্ঞানশকুন্তলং । তত্রাপি চ চতুৰ্থোহিহঃ যত্র য়তি শকুন্তলা । Justify or criticize this statement.

7. Explain clearly the dominant thoughts in any two of the following passages :—

(a) গচ্ছতি পুং: শরীরং ধাবতি পশ্চাদসংস্থিতচেতঃ ।

চীনাং শুকমিব কেতোঃ প্রতিবাতং নীরমানস্য ।

(b) সৰ্বথা ব্যবহৃতং বাৎ কুতো হুবচনীয়তা ।

যথা স্ত্রীণাং তথা বাচাং সাধুত্বে দুৰ্জনোজনাঃ ।

(c) বিভাকরেন মৰুতা মেঘানাং ভূয়সামপি ।

ব্রহ্মণীব বিবর্তীনাং কাপি প্রবিলয়ঃ কৃতঃ ।

8. Translate into English any one of the following passages :—

(a) উবেদু উবেদু অজ্জউত্ত গুণং মে মহম্ভুভিব্বহং পুরাকিদং তেহং দি অএহং পরিণাময়ুহং আদী জেন সাগুহোসোবি অজ্জউত্তো মই বিরসং সংবুত্তো ।

(b) জেন আঅদেহু বসিটমিসেসেহু বচ্ছদরী বসিসিদা অজ্জএব পজ্জঅদসুস রাত্তিসিণো জনঅসুস ভয়বনা বস্শীএণ দহিম্হু হিং এক পিবত্তিদো মহবক্কো বচ্ছদরী বসিজ্জিদা ।

9. Translate into Sanskrit the following extracts.

(a) Thou art dear to me through thy wonderful eminence of virtue, therefore, thou art my friend ; whatever is mine is thine also ; then why dost thou deal carnage among thy own people ?

(b) This hero boy of unknown lineage, having his lovely face flushed with slight anger, having his five locks dancing up and down, showers in the front of battle a rain of arrows upon my troops with his bow the points of which continually twang with the string.

(c) The face of heaven is overcast with rain clouds dark like the neck of a love-intoxicated peacock, which are adorned with the play of streaks of lightning moving around with frequent and fitful flashes.

SANSKRIT—PASS

Third Paper

Group A

(Attempt any THREE)

1. Trace the origin and growth of the *Mahabharata*.
2. What is Prof. Max Müller's Renaissance Theory ? Criticize his statement that literary activities in India ceased during the early centuries of the Christian era.
3. Give the probable date of the *Panchatantra* and name its earliest version. 'If not actually a Buddhistic work, the *Panchatantra* must be derived from Buddhistic sources'. What evidence can you produce in favour of this remark ?
4. Who was Asvaghosa ? Write all that you know about two of his main works.
5. Write short notes on any five :—Subandhu, Harisena, Bilhana, Dandin. Madhavacharya, Kumarila, Subhasitavali, and Barlaam and Josephat.

Group B

1. (a) Distinguish between any *three* pairs of the following :—
বনে উপবসতি and বনমুপবসতি ; পতিবদ্বী and পতিমতি ; হৃগকিৰ্ণায়ুঃ and হৃগক
জাপগিকঃ ; বিনয়তি and বিনয়তে ।
- (b) Account for the case-ending in the words underlined :—
চন্দ্রনি দ্বিগিনিং হন্তি ; কদতঃ শিশোঃ প্রোব্রাজীৎ ; মরুত দ্বিবন্ হরিঃ ; পর্বতো বহিমান্ বৃহাৎ ;
অকণা কাণঃ ; কলেভো বাতি ।
- (c) Expound the *samasa* in *five* of the following :—
সপত্নী, কিংরাজা, কেশাকেশি, উপবনন্, হৃগক, পুণ্যাহ, and গ্রামান্তরং ।
- (d) Conjugate the following roots :—জী in লট্ or লঙ্, third person plural ; জ in লট্ first person plural or লঙ্, second person singular ; বি (to know) in লঙ্ or লিট্ second person singular ; অস, in লোট্ second person singular ; নদ in লঙ্, third person singular or বা, in লঙ্, third person plural.

(c) Give *five* declined forms of the following bases :—*सविध्* nominative and dative singular ; *अक्ष्* nominative singular and locative plural, *पुमान्* accusative plural and ablative singular ; *पविन्* accusative plural and dative singular ; *अक्षर्* (masculine) nominative singular and instrumental plural.

2. (a) Correct the errors in *five* of the following, giving reasons for the corrections made :—

- (i) দৈত্যানাং বাতুকো হরিঃ ।
- (ii) সাধু বিজয়তি রাজী ।
- (iii) ন ধনন্ত প্রয়োজনম্ ।
- (iv) কিং মহং সংজ্ঞ্যসি ।
- (v) গ্রামাদ্ দক্ষিণেন নদী ।
- (vi) স্বস্তি রাজে সপুত্রায় ।
- (vii) এবৰ্ষিক্ৰুগ্ধতি ।

(b) Express by one word any *three* of the following :—

নাৰা তরতীতি ; কুলে জাতঃ ; সৰা ভবঃ ; অন্তি শুচিৰ্ভবতি ; পুনঃ পুনঃ গচ্ছতি ।

3. Translate into English *two* of the following extracts.

(a) স গচ্ছা বিভাগুহং ষাঃহৈঃ সমাবেদিতঃ এবিশ্ব, শিরসা প্রণম্য, সবিনয়মানসে রাজপুত্রা-
নুমতো জ্বীয়ৎ । হিহা চ মুহূৰ্ত্তমাত্রং বলাহকন্তত্রাপীডয়ুগ্ধত্যা দর্শিতবিনয়ো ব্যজিচ্চপং—
কুমার, মহারাজঃ সমাজপতি—পূর্ণা নো মনোরথাঃ । অধীতানি শাস্ত্রানি । শিক্ষিতাঃ সকলাঃ
কলাঃ । গতোহসি সর্বাধ্যুধবিভাগুহ পুরাং প্রতিষ্ঠাম্ । অনুমতোহসি নির্মমায় বিভাগুহাৎসর্বাচাঠৈঃ
উপগৃহীতশিক্ষমবগতসকলকলাকলাপং পৌৰ্ণমাসীশশিনমিব নবোদগতং পত্রতু হ্যং জনঃ ।

(b) তদন্তপ্রভৃতি নির্গত্য দর্পনোৎস্রকাত্যো দদ্যা দর্শনমখিলাত্যো যাতৃত্যং, অতিবাস্ত চ গুরুন,
অপগতনিরঞ্জেণা বধ্যাহুযমুত্তব রাজ্যস্থখানি । সংমানয় রাজলোকম্ । পুত্রয় বিজাতীন ।
পরিপালয় প্রজাঃ । আনন্দয় বন্ধুবর্গম্ । অরং চ তে ত্রিভুবনৈকরত্নমলিগরুত্ভসমুদ্রব ইজ্জায়ুধনামা-
ভূরঙ্গমঃ প্রেবিত্তো মহারাজেন হারি তিষ্ঠতি । এস খলু দেবস্ত পারসীকাবিশিষ্টিনা ত্রিভুবনান্তর্ঘ্য-
মিতি কৃত্বা প্রেহিতঃ । তদরমমুগুগুজ্ঞমধিরোগেন । ইত্যভিধায় বিরতবচসি বলাহকে, চত্রাপীডয়-
শিত্তরাজ্যং শিরসি কৃত্বা “প্রবেত্ততামিচ্ছামিচ্ছামি” ইত্যাদিবেশ ।

(c) এবমুপমাচ্যমানন্ত তপোধন পরিষদা স মহামুনিঃ প্রত্যবদৎ—অতিমহাদিগ্‌মার্জ্যমাখ্যাত-
বাম্ । অল্পশেষমহঃ । প্রত্যাঙ্গীদতি চ ন জ্ঞানসমরঃ ! ভবতামপ্যতিক্রামতি দেবার্জ্জনবিধিবেলা ।
তদ্ব্যভিষ্টন্ত ভবন্তঃ সৰ্ব্ব এব তাবদাচরন্ত বোধোচিতং দিবসব্যাপারম্ । অপরাহসময়ে ভবতাং বিশ্রকো-
পরিষ্টানামাদিতঃ প্রভৃতি সৰ্ব্বমাবেদয়িষ্যামি—যোহহম্, যচ্চানেন কৃতসমপন্নম্ অস্মিন, ইহলোকে
বদান্ত সংহৃতিঃ । অয়ং চ তাবদপগতক্লমঃ ক্রিয়তামাহারেণ” । ইত্যভিধায় সঃ মুনিভিঃ
জ্ঞানাদিকমুচিতং দিবসব্যাপারমকরোৎ ।

1931

SANSKRIT—PASS

First Paper

1. Translate into English *either* of the following groups of
Slokas :—

Group A.

- (a) বিশঙ্কমানো ভবতঃ পরাভবং
নৃপাসনস্থোহপি বনাবিবাসিনঃ ।
ছরোদরচ্ছদ্যজিতাং সমীহতে
নয়ন জেতুং অগতীং সুবোধনঃ ॥
- (b) মতিমান্ বিনয়প্রমাণিনঃ
সমুপেক্ষেত সমুন্নতিং দিবঃ ।
সুজয়ঃ খলু তাদৃগন্তরে
বিপদস্তা হবির্নীতসম্পদঃ ।
- (c) স রাজা পুরুষো দণ্ডঃ স নেতা শাসিতা চ সঃ ।
চতুর্গামাশ্রমাণাং চ ধর্মন্ত প্রতিকুলঃ স্তবতঃ ।
- (d) সপ্তকৃত্যন্ত বর্গন্ত সৰ্ব্বত্রৈবাহুযজিষঃ ।
পূর্বং পূর্বং গুরুতরং বিভাষ্যসনমাস্মদান্ ।

Group B

(a) পুরসেনা ধামবতাং বশোধনাঃ

হুঃসহং প্রাপ্য নিকারবীৰ্যম্ ।

ভবানুশাস্তেদধিকুৰ্বতে রতিং

নিরাশ্রয়া হস্ত হতা মনসিতা ।

(b) বিষভামুদয়ঃ হুমেষসা

ভুৰবন্ততরঃ হুমৰ্ণঃ ।

ন মহানপি ভূতিমিচ্ছতা

কলসম্পৎ এবণঃ পরিকরঃ ।

(c) অত্যাং কাকঃ পুরোভাশং বা চ লিছান্নবিস্তথা

সাম্যং চ ন স্তাৎ কস্মিংশিৎ এবৰ্ত্তেতাধারোত্তরম্ ।

(d) নিতামুত্তমগুঃ স্ত্রীত্যাং বিবৃতপৌরুষঃ ।

নিত্যং সংবৃতসংবার্যো নিত্যং ছিদ্ৰামুসার্বরেঃ ।

2. (a) Comment on the formation of ছরোদরম্ and হুমেষসা ।

(b) Account for বগী in ধামবতাম্ and *atmanepada* in অধিকুৰ্বতে in

B (a).

(c) Derive শাসিতা and শাস্যম্. Conjugate the root of the former word in *1st* second person singular and in *1an* third person plural.

(d) Suggest an alternative form for নিকার.

(e) Expound the *samasa* in বিনয়প্রমাধিনঃ and কলসম্পৎ এবণঃ as used above.

(f) Name the vices referred to by the underlined expression in A (d).

3. Give in simple Sanskrit sentences of your own the substance of *either* of the following *shlokas* :—

(a) ব্রজন্তি তে যুচধিরঃ পরাভবং

ভবন্তি মাদ্যবিষু বে ন মায়িনঃ ।

এবিশু হি ব্রজন্তি শঠানুধাবিশান্

অসংবৃত্তানুশাসিতা ইবেবযঃ ॥

- (b) অভিবৰ্হতি বোহুপালয়
 বিধিবীজানি বিবেকবারিণ।
 স সদা কলশালিনীং ক্রিয়াং
 শরৎ লোক ইবাধিত্তি ॥

Change the voice of the second half of *either* of these *slokas*.

4. Annotate *either* of the following *slokas* :—

- (a) ধ্বজ্জগৎ মহীভূর্গমকুর্গং বাক্ষমেব বা।
 নৃভূর্গং গিরিভূর্গং বা সমাজিত্য বসেৎ পুংস্ ॥
 (b) অমাত্যরাষ্ট্রভূর্গার্ঘদত্তাখ্যাঃ পঞ্চ চাপরাঃ।
 প্রত্যেকং কথিতা হেতাঃ সংক্ষেপেণ বিস্তুতিঃ।

5. *Either*, What, according to Manu, are the guiding principles of taxation ? How should gold, crops, and perfumes be taxed ? What kind of tax should an artisan pay ?

Or, Write a clear note on *duta*—his usefulness, functions, and qualifications.

6. Refer to the context and explain fully any *two* of the following extracts :—

- (a) পরপ্রণীতানি বচাসি চিহ্নতাং
 প্রযুক্তিসারাঃ খলু বাতৃশাং গিরঃ।
 (b) ন সমরপরিরক্ষণং ক্রমং তে
 নিকৃতিপরেষু পরেষু ভূরিধামঃ।
 (c) প্রভবঃ খলু কোশদত্তয়োঃ
 কৃতপঞ্চাঙ্গবিনির্গয়ো নরঃ।
 (d) সহতে ন জনোহপ্যধঃক্রিয়াং
 কিম্ লোকাধিকথান রাজকম্।

Derive রাজকম্ and parse পরেষু in (b).

7. Translate into Sanskrit :—

- (a) Not with other men's faults and other men's failings,
 Nor the things they have done, nor the things
 left undone,

- Should the wise man be concerned ;
 Let him look to his own things done and undone.
 (b) Just as a flower is fair in its colour,
 But if it lacks odour its beauty is hollow ;
 So fair are words well-spoken
 But empty the words which deeds do not follow.

SANSKRIT—PASS

Second Paper

1. *Either*, Discuss the dramatic necessity of the sixth act of *Sakuntala*.

Or, Explain fully the dramatic propriety of the curse of Durvasa in the matter of the development of the play.

2. *Either*, What part is played by the Vidushaka in *Abhijnana-sakuntala* ?

Or, Contrast the characters of Sarngarava and Saradvata as revealed in the Court Scene.

3. (a) Translate into English and then fully annotate in English any three of the following :—

(i) असंशयं कृतपरिग्रहकम्।

बर्धास्यस्तम्भित्वा वि मे मनः ।

सतां हि समेहपदेभ्यु वञ्च्यु

अमाश्रयस्तुः करणप्रवृत्तयः ।

(ii) काव्यं श्रिया न हलन्ता मनस्य तडावर्णनावासि ।

अकृतार्थेऽपि मनसिजे रतिवृत्तप्रार्थना कुरुते ।

(iii) सारंगतने सवनकर्तुं नि संग्रह्यते

वेदीं हताशनवतीं परितः अवताः ।

हाराश्रयं बहवः उरमाध्वानाः

सङ्घापरोदकपिशाः पिशिताशनानाम् ।

(iv) अर्थो हि कदा परकीर एव

ताम्र संश्रुत परिग्रहीतुः ।

জাতো মহায়ং বিশ্বঃ প্রকাশঃ

প্রতাপিতস্তাস ইবান্ধরান্না ॥

(v) উৎসুক্যমাত্মবসারয়তি প্রতিষ্ঠা

ক্লিষ্টাতি লক্ষণমিলালনবৃত্তিরেব ।

মাক্তিপ্রমাপনরনায় বর্ষা প্রমায়

রাজ্যং বহুত্বতদগুণিবাতপত্রম্ ॥

(vi) সংরোপিতেৎপ্যাস্তনি ধর্মপন্নী

তাক্ষা ময়া নাম কুলপ্রতিষ্ঠা ।

কলিঙ্গমাশা মহতে কলায়

বিশ্বজ্ঞা কাল ইবোত্তবীজা ॥

(vii) ভবেনবু রসাধিকেষু পূর্কং

ক্টিতিরকার্ধ্যমুশস্তি যে নিবাসম্ ।

নিরতৈকরতিত্রতানি পশ্চাৎ

তরুণানি গৃহীভবন্তি তেবাম্ ॥

(b) Comment grammatically on any four of the following :—

অসংশয়ম্ and প্রমাণম্ in (i), মনসিজে and উত্তপ্রার্থনা in (ii) অবসারয়তি in (v) ;
সংরোপিতে and কলায় in (vi) ; ক্টিতিরকার্ধ্যম্ and পশ্চাৎ in (vii).

4. *Either*, Give in your own words, *either* in English or in Sanskrit, the main plot of *Ratnavali*, and indicate the original sources of this drama.

Or, Describe *either* in English or in Sanskrit the *Madanamahotsava* at Kausambi.

5. Explain fully *either* in English or in Sanskrit :—

সংগ্রাপ্তং মকরধ্বজেন মখনং বস্তো মদর্শে পুরা

তন্ম যুক্তং বহুমার্গগাং মম পুরো নিলজ্জ বোচুত্তব ?

তামেবানুসরণ্যভাবকুটীলাং হে কুরুকণ্ঠগ্রহঃ

মুকুত্যাং কবা মমজিতনরা লক্ষ্মীশ্চ পারাৎস বঃ ॥

Does it foreshadow the main theme of the drama ? If so, explain how.

6. *Either,*

উদ্যোগকলিকং বিপাতুরকং প্রারজ্জ্জ্বাং অশা-

দায়াসং বসনোদগমৈরবিরতিভরতীয়াশ্বনঃ ॥

অভোভানলভামিমাং সমদনাং নারীমিবাভ্যাং এবম্

পশ্চন্ কোপবিপাটলদ্ব্যতিমুখং দেব্যোঃ করিডামাহম্ ॥

Explain the whole matter condensed in this verse.

Or, Explain fully what is passing in the king's mind when he exclaims :—

কষ্টং ভোঃ কষ্টম্

কিং দেব্যোঃ কৃতদীর্ঘরোষমুভয়মিচ্ছস্মিতং তন্মুখং

অভ্যাং সাগরিকং প্রমোদগতরুবা কিং তর্জয়মানাং তথা ।

বহুা নীতমিতো বসন্তকমহং কিং চিত্তরাশীত্যাহো

সর্বাংকারকৃতব্যথঃ ক্ষণমপি প্রাপ্তোমি নো নিবৃন্তিম্ ॥

তং কিমিদানীমিহস্থিতেন প্রয়োজনম্ । দেবীং প্রসাদয়িতুমভ্যন্তরমেব প্রবিশামি ।

7. *Either, Comment grammatically on any four of the following :—*

(a) মা অন্তথা সন্তাব্যম্ ।

(b) সা...হুঃখং ময়া হৃদপিভা ।

(c) পাতালং...মাং...সংস্রবরতীব ভুজঙ্গলোকঃ ।

(d) মামবধীর্ষা কুতোহতিক্রামসি ।

(e) প্রিয়বরস্তান্ত নিবেদয়ামি ।

(f) প্রিয়বরস্ত আগচ্ছতি...এনমুপসর্পামি ।

Or, Sanskritize the following :—

বাস—অজ্ঞ জজ্ঞং এক কিং ৭ ভগামি জহ পড়িবাদেহি সে বজ্ঞাবলিঙ্গি ।

বিদু—ভোদি হই তু এ জগিদো অমলসূ আসত ।

বাস—এহি রজ্ঞাবলি এহি । এত্তিঅং বি দাব মেং বহিগিন্নাভুকবং ভোহু ।...পড়িহুহু মম বহিগিঅং রূজ্ঞাবলি অজ্ঞউত্তো ।

8. *Translate into Sanskrit :—*

When a youth is invested with the sacred thread, he must reside in the house of his preceptor and apply himself to the study of the

Vedas. He must worship, in the morning and in the evening, the, fire and the sun ; then he must bow to his spiritual guide. He must always stand when his preceptor is standing, must move when the latter is moving, and while the latter is sitting must occupy a seat lower than the latter's. Whatever portion of the Vedas he is taught by his preceptor, he must listen to and recite with undivided mind. Every morning he should bring his preceptor fuel, water, or anything the latter requires. In short, a student of the Vedas is required to be a loyal, cheerful, and energetic worker in his preceptor's home—ever attending his duties, both domestic and religious.

SANSKRIT—PASS

Third Paper

Group A.

1. Translate into English *two* of the following extracts :—

(a) বোবিসত্বঃ কিল কস্মিচ্চিহ্নহতি ব্রাহ্মণকুলে জ্ঞানপরিগ্রহং চকার । তত্ৰ যত্ৰ কনীরাসং যড়পরে জাতরন্তদম্বুপগুণা বক্তব্যঃ সপ্তমী চ ভগিনী । স কৃতক্ৰমঃ সাক্ষ্যে সোপবেদেবু বেদেবু সমধিগতবিভাষণাঃ সংমতো জগতি দৈবতবদ্ব্যতাপিতরো পরমা ভক্ত্যা পরিচর্য্যমাচাৰ্য ইব পিতৰে তান্ জাতুন্ বিজাতু বিনয়রসবিনয়োকুলো গৃহাবসতি ন । কালক্ৰমাত্মতাপিত্রোঃ কাল-ক্রিয়য়া সংবিগ্রহনয়ঃ কৃষা তয়োঃ প্রেতকৃত্যানি ব্যতীতেষু কেচিৎ দিবসেযু তান্ জাতুন্-সংনিপাতোবাচ ।

(b) এব লোকস্ত নিরন্তঃ শোকাতিবিরসঃ ক্রমঃ ।

সহ হি বাপি হৃচিরং যুত্যান্ বধিরোজ্যতে ॥

তৎপ্রজিতুমিচ্ছামি হেরঃ স্নাত্যেব বস্মনা ।

পুরা যুত্ৱাপি পুৰ্ৱি গৃহসংরক্তমেব বাস ॥

বতঃ সৰ্ব্বান্বেব ভবতঃ সংবাদয়ামি । অন্ত্যত্ৰ ব্রাহ্মণকুলে ধৰ্ম্মেণ বধাধিগতা বিভবমাত্রা শক্যমনয়া বৰ্ণিতুন্ । তৎসৰ্ব্বৈরেব ভবন্তিঃ পরস্পরং হেহগৌৰবাভিমুখৈৰ্বেদাধ্যয়নপৰৈহিত্যাতি-বজ্রপ্ৰশংসবৎসলৈৰ্ধৰ্ম্মপারপৈজুহা সন্মগ্ন গৃহমবিত্যবাস্য ।

(c) তদিদমত্র প্রাপ্তকালমিতি নিশ্চিত্য স রাজা বজ্রাভয়সংকল্পক ইব নাম তত্ত্ববাং বচনং প্রতিগৃহ্যাবোচসেনান্ । সনাথঃ ঞ্জহন্নুগ্রহবাণ্চ যদেবং মে হিতাবহিতমনসোহত্রভবন্তঃ ।

তদ্বিছামি পুংসমেধসহস্রেন বহুন্ অবিভক্তাঃ তদুপবোধ্যাসংভারসম্মাননবার্হ বধাবিকারমমাতোঃ ।
পরীক্ষ্যতাং সম্ভাষ্যনিবেশনবোধোয়া ভূমিপ্রদেশঃ । অধেনং পুরোধিত উবাচ । ইতিভাষ্যসিদ্ধে
নাতুং তাবদ্ব্যাহার্য একত্ব বক্তব্য সম্ভাষ্যবক্তৃষে অধোভেরবানারভঃ করিক্তে ক্রমেন ।

2. (a) Expound the *samasa* in *five* of the following —

বুবজানি, বাগ্নাতুর, গীতোলাগীর্ষ, আতপশুকা, হুপ্রোভ, অন্তর্গিহি, and উনবৃত্তঃ ।

(b) Use the alternative case ending in *four* of the words underlined :

গবাং কৃকা বহুকীরা । মরা সেব্যো হরিঃ । গভেন ক্রীণাতি । অকৈর্দ্বীবাতি । কাররতি
ভূতোন কটম্ । তোকেন মৃতঃ ।

(c) Distinguish between any *three* of the following pairs :—

অপথং, অপথঃ । কবরী, কবরা । হুহ্রং, হুহ্রনয়ঃ । রাজকম্, রাজক্কম্ । তারকা,
তারিকা ।

(d) Express by one word any *three* of the following :—

সায়ঃ ভবঃ ; বিহুবঃ ঈষন্নয়ঃ ; কলানি অন্ত সংজ্ঞাতানি ; ধর্ম্মাদনপেতন্ ; মদঃ বিকারঃ ।

(e) Conjugate *four* of the following roots :—*বি* in লট্ second person singular ; *শাস্* in লট্ third person plural ; *স্ত* in লোট্ second person plural ; *শক্* in লিট্ second person dual ; *বহ্* in লিট্ first person plural ; and *বস্* in লুঙ্ second person singular.

(f) Give the declined forms of the following :—*ভূরাসাহ্* nominative and ablative singular ; *বৃত্রহন্* and *সান্* locative singular ; *অদস্* (feminine) dative singular ; and *পাদ্* instrumental singular.

(g) Correct the errors in the following giving reasons for the corrections made :—

(i) তৈলে সর্পির্জানীতে ।

(ii) বো ধর্ম্মঃ স সত্ত্বির্ম্মতঃ ।

(iii) ন হ্যং তুণায় মন্তে ।

(iv) রথেন সংচরতি শূরঃ ।

(v) গোপী কৃকার তিষ্ঠতি ।

(vi) অধিজ্যধনুন্নয়ঃ পুরুষঃ ।

(vii) পক্ষাঃকলো হস্তঃ ।

(h) Explain by examples the difference between a *Bahubrihi* and *Tatpuruṣa* compound.

Group B

(Attempt any THREE questions)

1. Write all that you know of two important poets preceding Kalidasa.

2. Produce evidence to show whether Sanskrit drama can have any genitive connexion with that of Greece.

3. Give a brief idea of the doctrines of the Sankhya system of philosophy and state in what way it is connected with or different from the Buddhistic doctrine.

4. Show that didactic fable was reflected in Indian literature even before the development of the text of the Panchatantra. Write what you know about two of the early translations of the Panchatantra.

5. Write short notes on any five of the following :—Ratnakara, Ksemendra Varahamihira, *Aryasaptasati*, *Navasaasanakacharita*. Somadeva, and Kamandaka.

1932

SANSKRIT—PASS

First Paper

1. Translate into English two *slokas* from Group A, one *sloka* from Group B, and two *slokas* from Group C :—

Group A

- (a) মহামহানীলশিলাকূটঃ পুরো নিবেদিবান্ কংসকুব্ধঃ স বিষ্টরে ।
জিতোদয়াজ্জেরতিসারমুচ্চকৈরচূচরচক্রমসোহভিরামতাম্ ॥
- (b) নিদাষধামানমিবাধিকীধিতিঃ শূলা বিকাশঃ শূনিমভ্যুপেয়বী ।
বিলোচনে বিজ্রদমিজ্রিতজ্রিণী স পুণ্ডরীকাক ইতি শ্রুটৌহভবৎ
- (c) পরন্তু বর্গাবিধমুক্ততাং নিজঃ দ্বিজিত্বতাদোষমজিন্দ্যাদিতিঃ ।
তমিক্কারাধিকিত্বং সৰ্গকৈঃ কুলৈর্গ ভেদে কপিনীং কুলজতা ।

(b) ব্রতবন্দেবশেষতো পিত্রো কৰ্ম্মণ্যৰ্হিবৎ ।

কামবভাৰ্ষিতোহদীয়াত্মতমন্ত ন লুপ্যতে ॥

5. Give, in simple Sanskrit sentences of your own, the substance of *one* of the following *s'okas* :—

(a) হরতাষং সংপ্রতি হেতুরেতৎ: শুভন্ত পূৰ্ণাচরিতৈ: কৃতং শুভৈ: ।

শরীরভাজাং ভবদীয়াবর্শনং বানক্তি কালক্রিতয়েহপি ষোগ্যতাম্ ॥

(b) সম্পদা হৃদ্বিরম্মতো ভবতি স্বল্পমপি য: ।

কৃতকৃতো বিধিমন্তে ন ত্রিবর্দ্ধয়তি তন্ত তাম্ ।

(c) তীক্ষ্ণা নাক্ষুদ্রা বুদ্ধি: কৰ্ম্ম শাস্তং প্রতাপবৎ ।

নোপতাপি মন: সোম্য বাগেকা বাগ্মিন: সত: ॥

Derive *এতৎ* and give the third person singular *লুট্* form of its root. Indicate the context of (b).

6. (a) Explain any *two* of the following terms :—

ব্রহ্মজ্ঞানি, ব্রাহ্মতীর্থ, and উপাধায়.

(b) Write notes on (i) the proper age of *upanayana* and (ii) the relative value of the conditions entitling a man to respect.

7. Translate into Sanskrit any *three* of the following extracts :—

(a) As a fire in one moment consumes with its bright flame the fuel that has been placed on it, even so he who knows the Veda destroys all guilt through the fire of knowledge.

(b) Let him bathe three times each day thrice each night, in his clothes ; let him on no account neglect the special duties of a *snataka* :—

(c) Let him not dwell together with the murderers of children, with those who have returned evil for good or with the slayers of suppliants for protection.

(d) Austerity and sacred learning are the best means by which a Brahmana secures supreme bliss ; by these two he destroys guilt and obtains the cessation of birth and deaths.

(e) Command of armies, royal authority, the office of a judge, and sovereignty over the whole world, he only deserves who knows the Veda science.

SANSKRIT—PASS

Second Paper

1. *Either*, Point out and explain the virtuous and noble traits in the character of Dushyanta as revealed in the Fifth Act of *Sakuntala*.

Or, Show by apt reference that Sakuntala was a pet of the entire sylvan home of Kanva, man and nature.

2. *Either*, Explain from the dramatic point of view the mission of Sanumati (or Misrakesi) as set forth in the Sixth Act of *Sakuntala*.

Or, Explain, stage by stage, how Dushyanta was helped into recognition of his unknown son.

3. *Either*, Explain in English any *three* of the following :—

(a) শান্তমিনমাত্রপদং কুন্তি চ বাহুঃ কৃতঃ কলমিহান্ত ।

অথবা ভবিতব্যানাং দ্বারাণি ভবন্তি সর্বত্র ।

(b) সমপ্রদানেনু তপোধনেনু

গুণং হি দাহাম্বকমন্তি তেজঃ ।

স্পর্শানুকূল্য ইব সূর্য্যকান্তা-

স্তদন্ততেজোহভিভবামন্তি ॥

(c) পুট্টা জনেন সমদুঃখস্থেন বালা

নেয়ং ন বক্ষ্যতি মনোগতমাধিহেতুম্ ।

দুট্টো বিবৃত্য বহুশোহপ্যনয়্যাসতৃক-

মব্রাস্তরে অবশকাতরতাং গতাহস্মি ॥

(d) যন্ত দ্বরা ত্রণবিরোপশমিদ্বীনাম্

তৈলং স্তম্বিত্য যুগে কুশস্থচিবিক্রে ।

ভ্রামাকমুটপরিবর্জিতকো জহাতি

সোহয়ং ন পুত্রকৃতকঃ পদবীং যুগন্তে ॥

(e) ভানুঃ সন্সন্ যুক্তভূমদ এব

রাজিলিবাং গন্ধবহঃ প্রয়াতি ।

শেবঃ সৈবাহিতকুমিভারঃ

বঠাংশংক্ৰমপি দর্শ্য এবঃ ॥

(f) যেন যেন বিবৃজ্যন্তে প্রজাঃ সিকেন বহুনা ।

স স পাণাবৃতে ভাসাং হৃত্ত ইতি হৃত্তান্ ॥

(g) বসনে পরিধুসরে বসনা

নিরমকামমুখী যুতৈকবেদিঃ ।

অভিনিবন্ধনশ্চ শুকলীলা

মম দীর্ঘং বিরহব্রতং বিভর্তি ॥

Or, Explain in Sanskrit any two of the following :—

(a) অধ্যাক্রান্তা বসতিরমুনাপ্যাশ্রমে সর্বভোগো

রক্ষাযোগাদয়মপি তপঃ প্রভাহং সঙ্কিনোতি ।

অভ্যপি ছাং স্পৃশতি বশিনশ্চারণবশগীতঃ

পুণ্যং শকো মুনিরিত্তি মুহঃ কেবলং রাজপূৰ্বঃ ॥

(b) মহাভাগঃ কামং নরপতিরভিন্নহিতিরসো

ন কশ্চিৎপর্ণানামপখমপকৃষ্টৌহপি ভজতে ।

তথাগীৰ্ণং শব্দত্ পরিচিতবিবিক্তেন মনসা

জনাকীৰ্ণং মন্তে হতবহপরীতং গৃহমিব ।

(c) প্রোহৃদাদিশা হিতস্ত মনরো যন্তেজসঃ কারণং

ভর্তারং ভুবনত্রয়স্ত স্তুবে বৎ বজ্রভাগেশ্বরম্ ।

যস্মিন্ভাস্তবঃ পরোহপি পুরুষশ্চক্রে ভবায়ান্দাদং

দ্বন্দ্বং দক্ষমরীচিসত্ত্বমিদং তৎপ্রষ্ট রেকান্তরম্ ।

4. Either, Explain Yaugandharayana's diplomacy in all its aspects as revealed in *Ratnavali*.

Or, Contrast the characters of Vasavadata and Ratnavali in the same drama.

5. Either, Translate into English any two of the following :—

(a) দুর্লভলক্ষণঅপুৰাণ্ড লক্ষ্য গুণই পরবসো অম্বা ।

পিঅসহি বিসমং পেদ্বং মরণং পু বরমেকং ॥

(b) জীলাবধূতপদ্মা কথরতী পক্ষপাতমধিকং নঃ ।

মানসমুপৈতি কেরং চিত্রগতা রাজহংসীব ॥

(c) ~~অসংখ্য~~ শৈবশিখরং তদ্বদনাগতকান্তিসর্ব্বথঃ ।

অতিকর্ষ্মিবোদ্ধ করঃ হিতঃ পুরস্তাশ্রিশান্যঃ ।

Or, Explain (a) or (b) in the following (either in English or in Sanskrit) :—

(a) নষ্টং বর্ষবরৈমমুত্তগণনাভাবাদপান্ত্র জগা-

মন্তঃ কুক্কিককুক্কন্ত বিশতি ত্রাসাদয়ঃ বামনঃ ।

পর্যন্তাশ্রিভির্নিজন্ত সদৃশঃ নান্নঃ কিরাতেঃ কৃতং

কুজা নীচতরৈব যান্তি শনৈকরাগ্নেকশাশ্বিনঃ ॥

(b) বিবৃদ্ধিঃ কল্পন্ত প্রথরতিতরাং সাধসবশা-

দবিস্পষ্টাং দৃষ্টিং তিরয়তিতরাং বাস্পপটলেঃ ।

অলম্বণং বাণীং জড়য়তিতরাং গলদতরা

জরায়ঃ সাহায্যং মম হি পরিতোবোহন্ত কুরুতে ॥

6. Write grammatical notes on any five of the underlined expressions in Questions 3 and 5.

ভবিতব্যানাম্, পুত্রকৃতকং, রাজান্ধিবঃ, ধৃতৈকবেশিঃ, প্রত্যহম্, অপথম্, পিঅসহি, পুরস্তাং, আশ্রিভিঃ, শনৈকঃ, প্রথরতিতরাম্, তিরয়তিতরাম্ ।

7. Translate into Sanskrit :—

The old times are gone, gone for ever ; they will never return. The world is changing every moment before us. Old customs, old systems, must change. Nothing human is permanent, and probably nothing divine is also permanent with regard to this world. Why fight shy of changes ? Life grows in changes—healthy changes. Don't decry the reformers. When reforms are proposed, see that they suit you as a community. If there are defects, point them out clearly and publicly. The people as a whole will judge everything aright. Man, as man, is gifted with that instinct. Have faith in that gift—a divine gift.

SANSKRIT—PASS

Third Paper

Group A.

1. Translate into English two of the following extracts :—

(a) দেব ভবতঃ শ্রুতিপথমাগতৈব বিজ্ঞাটবী যদেকদেশে দত্তকারণ্যে সসীতো রাম-

লক্ষণাবুযিতৌ। যত্র চাগন্ত্যমূনে: পাবনমাজ্জমপদং বৰ্জতে, যন্তোপকর্থে পুণ্যসলিলং পল্ল্যাধ্যঃ
সরোহস্তি। তত্ত পশ্চিমে তীরে জীর্ণঃ শাল্মলীপাদপ ব্যাপ্তব্যোমদিগন্তরো বৰ্জতে। তস্মিন্ কৃত-
কুলারানি বিহঙ্গমসহস্রানি নিবসন্তি। দিবা যত্র কুত্রাপি ঞ্চাণবাভ্রাং নির্বত্য রাত্রৌ শলীড়েনু হুংখং
শেরতে। তস্মিন্নেব বৃক্ জায়রা সহ বৰ্জমানস্ত পরিণতবয়সঃ পিতুরহমেবৈকঃ শূদ্ররভবন্।

(b) কাপালিক উবাচ—“মা ভৈবীঃ, পুত্রশ্চে ন মরিত্ততি, শিবপ্রসাদেন গৃহমেষ্ঠতি, পরং
অশানভূমৌ বুদ্ধিসাগরেণ সহ হোমত্রব্যাণি প্রেবয়”-ইতি। ততো রাজা “কাপালিকেন বহুত্বং
তৎসর্বং কুৰ্জ” ইত্যুক্ত্বা বুদ্ধিসাগরঃ প্রেবিতঃ। ততো রাত্রৌ গচ্ছপেণ ভোজোহপি নদীপুলিনে
নীতঃ। যোগিনা ভোজো জীবিত ইতি চ বাতৰ্ লোকেষু প্রসূতা। ততো গজেন্দ্রাধিরাজো বান্ধিভিঃ
স্বয়মনো ভেরীমুদঙ্গাদিনিদাদেন দিশৌ বধিরয়ন্ পৌরামাত্যপরিবৃত্তো ভোজরাজো রাজভবনমগাৎ।
রাজাপি তমালিজ্য আরোদীৎ। ভোজোহপি রুদন্তঃ মুক্তঃ স্তবারয়ং।

(c) হিমালয়ে তপস্ততো জিকোরাশ্রমং পাকশাসনো জাবীরসাইধ্বনা পরিক্রান্ত ইব মূনি-
রূপ আজগাম। তং দৃষ্ট্বা পৃথাস্থমুর্মহতীং মুদম্বাপ। হরিরঙ্জুনাদাভিষেঘোমপচিতিমাসাত্ত
পরিভ্রমমপনীয় ব্যাজহার। সাধুরয়ং তব সমারম্ভো যন্নবেহপি বয়সি তপস্চরসি। মাদৃশো
বর্ষারানপি প্রায়ো বিঘ্নৈরহ্নিয়েতে। শোভনেয়ং তবাকৃতিঃ শ্রেয়সীং গুণসম্পদং সংপ্রাপ্তা। লোকে
হি রম্যতা স্নলভা, গুণার্জনং পুনরুন্নভন্। যৌবনং শরদশ্ব ধরবঙ্গাভরণং, বিবরাশ্চাপাতরমণীয়াঃ
পরিণামবিরসাঃ। সততমাপত্তিঃ পরিক্রিষ্টমানস্ত প্রাণিনোহন্তকঃ শত্রুঃ।

2. (a) Form *sandhi* in any three of the following :—

প্রাক্ + মুখম্ ; চলন্ + চিট্টিভঃ ; মহান্ + লাভঃ ; হরী + অর্থো।

(b) Decline any three of the following :—

লক্ষ্মী in প্রথম (singular), নামন্ in দ্বিতীয়া (dual) ; অনড়হ্ in পঞ্চমী (dual) ;
রাজন্ in সপ্তমী (singular) ; ধনিন্ in সম্বোধন (singular).

(c) Conjugate any three of the following :—

অস্ (to be) in লট্ ; ক্রী in লোট্ ; আস্ in লিট্ ; গৃহ্ in লুট্ ; বা in লঙ্ ; বৃৎ in
বিধিলিট্, (all in the third person).

(d) Derive any four of the following :—

শ্রেষ্ঠঃ ; আভন্ ; শয়ানঃ ; যুগ্মানঃ ; বিদ্রবী ; ক্ষেপিষ্ঠঃ ; হান্তিকম্.

(e) Dissolve the *samasas* in any four of the following, naming
and explaining the nature of the compound in the case of each :—

দুঃখাতীত; যুধিষ্ঠির; চিত্রভূ; গোনস; অহিনকুলম্; আয়ুতি; অহুগবন্

3. Correct or justify any *four* of the following, giving your reasons for corrections :—

- (a) তাঃ স্মিয়ঃ আক্সনো নিন্দন্তি ।
- (b) ক্রুৎঃ পুরুষঃ শিলায়ামপ্যধিশেতে ।
- (c) রামস্ত পূর্বং গোবিন্দ আগচ্ছতু ।
- (d) ভিক্ষুকঃ শ্রেষ্ঠিনং ধনং বাচয়তি ।
- (e) দিবসে ত্রিঃ সঙ্খ্যামুপাসীত ।
- (f) অয়ং মম চিরন্তনো বয়ন্তো ভবিতব্যঃ ।

GROUP B.

(Attempt any THREE questions)

1. In any case, our Mahabharata is not only the heroic poem of the battle of the Bharatas, but at the same time also a *repertory of the old bard poetry*. Explain briefly.

2. Discuss 'the Age of the Ramayana'.

3. What is in your opinion 'the exact position of the Puranas in the history of Indian literature, both according to contents and chronology' ?

4. Give a brief account of the development of the Historical Kavya literature.

5. Write a note on the literature of the Popular Tale.

1933

SANSKRIT—PASS

First Paper

1. Translate into English *ONE sloka* from Group A, *TWO slokas* from Group B, and *THREE slokas* from Group C :—

GROUP A

- (a) অনন্তগুৰ্ণান্তৰ কেন কেবলঃ পুৰাণমূৰ্ত্তেৰ্হিমাৰগম্যতে ।
মনুস্মৃতিমপি হুৱাহুৱান্ গুণৈৰ্ভবান্ ভবচ্ছেদকৰৈঃ কৰোত্যধঃ ॥
- (b) তদেনমুল্লজিতশাসনং বিধেৰ্বিধেহি কীনাশনিকৈতনাতিথিৰ্হি ।
গুণৈৰ্ভবান্ বিপজ্জিমা পদো নিপাতনীয়া হি সতামসাধবঃ ॥

GROUP B

- (a) উত্তিষ্ঠমানস্ত পরো নোপেক্ষ্যঃ পথ্যমিচ্ছতা ।
সমো হি শিষ্টৈরান্নাতৌ বংশস্তাবাময়ঃ স চ ॥
- (b) পাদাহতং যজ্ঞস্য মুৰ্ধানমধিরোহতি ।
বহুদেবাপমানেহপি দেহিনস্তদুৰং রজঃ ॥
- (c) গুণানামাযথা তথ্যাদৰ্থং বিপ্রাবয়ন্তি যে ।
অমাত্যব্যঞ্জনান্না রাজ্ঞাং দৃষ্টান্তে শত্রুসংজিতাঃ ॥

GROUP C

- (a) আয়ুৰ্যং প্রাণুগো ভুঙক্তে যশস্তং দক্ষিণামুখঃ ।
গ্রিয়ং প্রত্যঘুগো ভুঙক্তে ঋতং ভুঙক্তে হ্যাদঘুখঃ ॥
- (b) জলপাতিঃ পৃথতে বিপ্রঃ কণ্ঠগাভিস্ত ভূমিপঃ ।
বৈজ্ঞোহস্তিঃ প্রাশিতাভিস্ত শূদ্রঃ স্পৃষ্টাভিরন্ততঃ ॥
- (c) ক্ষরন্তি সৰ্বা বৈদিক্যা জুহোতিষজতক্রিয়াঃ ।
অক্ষরং দুক্ষরং জ্ঞেয়ং ব্রহ্ম চৈব প্রজাপতিঃ ॥
- (d) ইল্লিয়াগাং তু সৰ্বেষাং যজ্ঞকং ক্ষরতীন্দ্রিয়ম্ ।
তেনান্ত ক্ষরতি প্রজাদৃতে: পাদাদিবোদকম্ ॥
- (e) উৎপাদকব্রহ্মদাত্ৰোগরীয়ান্ ব্রহ্মদঃ পিতা ।
ব্রহ্মজন্ম হি বিপ্রস্ত প্রেত্য চেহ চ শাখতম্ ॥

2. (a) Change the voice of *either* half of A (a), and account for the absence of the singular number in হুৱাহুৱান্.

(b) Expound the *samasa* in the underlined expression in A (b). Derive বিপজ্জিমা ।

(c) Account for the *atmanepada* in উত্তিষ্ঠমানঃ in B (a).

(d) Comment on the formation of अमातावाङ्मनाः in B (c).

(e) Parse प्रेत्य in C (e).

3. Explain either of the following *slokas* in English or in simple Sanskrit, and indicate its context :—

(a) अमानवं जातमज्जं कुले मनोः प्रताविनं ताविनमस्तमाञ्जनः ।

मुमुक्षुः ज्ञानमपि ज्ञानकीं न यः सदाभिमानैकधना हि मानिनः ।

(b) कृतः प्रजाक्षेमकृता प्रजाश्रया रूपान्निष्केपनिराकुलाञ्जना ।

सदोपयोगेहि ण्डरत्नमकरो निधिः श्रुतीनां धनसम्पदामिव ।

4. Write explanatory notes on one of the following *slokas* :—

(a) वड् ङगाः शतशस्त्रिभ्यः सिक्कयन्तोदयान्नयः ।

अश्वादीनां व्याकर्तृमिति ह्रस्वस्येहपालम् ।

(b) सर्वकार्याशरीरेषु मुक्ताङ्गकणककम् ।

सौगतानामिवास्त्रास्त्रो नास्ति मन्त्रो महीभूतम् ।

5. (a) Write a clear note on EITHER *abhivadana* OR naming ceremony and names.

(b) Define the following terms :—

त्राता, यजिरदेश, समराधुषित, and जितेन्द्रिय ।

6. Annotate any two of the following *slokas* :—

(a) श्वाद्यायेन व्रतेर्होमैरेविद्येनेज्याया मृतैः ।

महायज्ञेष्ट यज्ञेष्ट ब्राह्मीयं क्रियते तन्मूः ॥

(b) धर्माध्याय्यते श्रेयः कामार्थो धर्म एव च ।

अर्थ एवेह वा श्रेयस्त्रिवर्ग इति तु हिंतिः ॥

(c) त एव हि त्रयो लोकान्त एव त्रय आश्रमाः ।

त एव हि त्रयो वेदान्त एवोक्तान्त्रयोह्नयः ॥

7. Translate into Sanskrit :—

(a) When a danger is apprehended from robbers or thieves, it is considered as distress common to all, in such a case the danger must be repelled by all, not by one man alone, whoever he may be.

(b) Studying the Veda, practising austerities, the acquisition

of true knowledge, the subjugation of the organs, abstention from doing injury and serving the Guru, are the best means of attaining supreme bliss.

SANSKRIT—PASS

Second Paper

1. *Either*, Describe in English *or* in Sanskrit the charming features of the *asrama* of Kasyapa as set forth by Kalidasa in *Sakuntala*.

Or, Bring out clearly in English *or* in Sanskrit the full implication of the attempted but interrupted celebration of the spring-festival in the royal garden by Madhukarika and Parabhratika.

Or, Contrast the characters of Anasuya and Priyamvada, as well as of Saradvata and Sarngarava, and explain the dramatic aspect of the contrast in each case.

(The answer may be given *either* in English *or* in Sanskrit).

2. Write a Sanskrit commentary, after the manner of Mallinatha, on *one* of the following, and explain fully in English another *one* of the verses :—

(a) (i) চিত্রে নিবেশ্য পরিকল্পিত-সম্বোধনা

রূপোচ্চয়েন বিধিনা মনসা কুতা সু ?

স্ত্রীরঙ্গস্থিতিরপরা প্রতিভাতি সা মে

ধাতুর্বিভূত্বমুচিস্ত্য বপুশ্চ তক্তাঃ ॥

(ii) স্বপ্নো সু ? মায়ী সু ? মতিভ্রমো সু ?

ক্লিষ্টং সু তাবৎ কলমেব পুণ্যম্ ?

অসংনিবৃত্তৌ তদতীতমেতে

মনোরথা নাম তটপ্রপাতাঃ ॥

(iii) অহঙ্কাহঙ্কাহন এব তাবজ্

জাতুং প্রমাদস্থলিতং ন শক্যম্ ।

প্রজ্ঞাসু কঃ কেন পথা প্রবাসী-

তশেষতো বেদিভুমন্তি শক্তিঃ ?

(iv) কৃতং ন কৰ্ণাৰ্ণিতবন্ধনং সখে
শিরীবমাগণ্ডবিলম্বি কেশরম্ ।

ন বা শরচ্ছত্রমরীচিকোমলং
মৃণালমুদ্রং রচিতং স্তনাস্তরে ॥

(v) অসংশয়ং ক্ষত্রপরিগ্রহক্ষমা
বদার্যামস্তামভিলাষি মে মনঃ ।

সত্যং হি সন্দেহপদেষু বস্তুবু
প্রমাণমন্তঃকরণপ্রবৃত্তয়ঃ ॥

(b) Discuss grammatically *two* of the following :—

- (i) প্রতিভাতি মে ।
- (ii) পথা প্রযাতি ।
- (iii) অসংশয়ম্ ।
- (iv) প্রমাণং...প্রবৃত্তয়ঃ ।

Give one word for অহনি অহনি with the help of *samasa*.

3. Sanskritize, and then annotate in English *or* in Sanskrit :—

ভো দিঠ্ঠ । এদম্‌স মিঅআশীলস্‌স রণো বঅস্‌সভাবেণ বিবিবণো ক্ষি । অঅং মিও, অঅং বরাহো, অঅং সদ্‌লো ত্তি মজজ্জণে বি গিদ্ধাবিরলপাঅবচ্ছাআসু বণরাঈসু আহিণ্ডীঅদি । পত্ত-সংকরকসাআইং কড়ুআইং গিরিণইজলাইং গীঅত্তি । অণিঅদবেলং হুমমং সত্‌তুইঠ্ঠো আহারো অণহীঅদি । তুরগাপুখাবণকণ্ডিদসক্ষিণো রত্তিস্মি বি মে নিকামং সইদকং পথি । তদো মহন্তে এক পচ্চসে দাসীএপুত্তেহিং সউণিলুচ্ছএহিং বণগগহণকোলাহলেন পরিবোধিদা ক্ষি । এত্তএণ দাণিং বিপীড়ণে নিক্কমদি । তদো গণ্ডস্‌স উবরি পিণ্ডও সংবৃত্তো । হিও কিল অচ্ছো ওহীণেসু তত্তহোদো মিঅপুসারেণ অস্‌সমপদং পবিঠ্ঠস্‌স তাবসকণঅা নম অধণদাএ দংসিদা ।

4. *Either*, Contrast Chanakya and Rakshasa as politicians.

Or, Set forth in the form of history what you have read in *Mudrarakshasa*.

Or, Contrast the characters of Malayaketu and Chandragupta.

(The answer to Question 4 may be given *either* in Sanskrit *or* in English.)

5. Explain in *tika* form any one of the following :—

(a) জ্বরগ্রহঃ স কেতুশ্চক্রমসম্পূর্ণমণ্ডলমিদানীম্ । অভিতবিভুমিচ্ছতি বলাদ্—রক্ষত্বেনঃ
তু বৃথাগঃ ।

(b) কর্ণেনৈব বিবাক্তনৈকপুরুষব্যাপাদিনী রক্ষিতো হস্তঃ শক্তিরিবার্জুনঃ বলবতী বা চক্রগুপ্তঃ
ময়া । সা বিকোরিব বিকুণ্ঠপ্তহতকৃত্তাত্তিকশ্রেয়সে হৈড়িষেরমিবেত্য পৰ্বতনৃপং তথ্য-
মেবাবধীং ।

(c) কার্যোগক্ষেপমাদৌ তদুপমি রচয়ন্তস্ত বিস্তারমিচ্ছন্ বীজানাং গর্তিতানাং ফল-
মতিগহনং গুচুমন্তেদয়শ্চ । কুর্বন্ বুদ্ধা বিমর্শং প্রস্তুতমপি পুনঃ সংহরন্ কার্যাজাতং কৰ্ত্তা বা
নাটকানামিমমুত্তবতি ক্লেশমম্মদ্বিধো বা ।

6. *Either*, Discuss the grammar in any two of the following :—

(a) চীয়েতে কৃষিঃ ।

(b) কো লভতাং বিনাশম্ ।

(c) স সাচিব্যাং গ্রাহয়িতুং শক্যতে ।

(d) অা পারেভাঃ ।

Or, Complete the verse :—

সেবাং লাঘবকারিণীং কৃতধিরঃ স্থানে স্বষ্টিং বিদ্বঃ ।

7. Translate into Sanskrit :—

(a) Where are now those glories of Mathura ? Where are gone those of Ayodhya ? Where are those heroes of a hundred fights ? Ah ! they are gone, gone for ever ! Time brought them into existence ; time kept them up ; time destroyed them. Time alone rules supreme. Nothing of this world is permanent. Everything here is bound to perish. Nay, there are thinkers who even go further. Everything that *is*—ceases to *be* the very next moment. Change implies death. What is there that is not constantly changing ? Time itself is changeful.

(b) Unskilful he to fawn, or seek for power,

By doctrines fashioned to the varying hour :

Far other aims his heart had learnt to prize,

More bent to raise the wretched, than to rise.

SANSKRIT—PASS

Third Paper

GROUP A

1. Translate into English *two* of the following extracts :—

(a) আসীক্ষেবতীতটে বিদিশা নাম কাচিংপুরী মণ্ডনং ভূমণ্ডলন্ত পুরুষতপুরুষার্থবিভব। তন্তাং নিজভূজবীৰ্যবিজিতসকলারাতিমণ্ডল আঞ্চল ইব শ্রীমান্ভাজা শূদ্রকোহভবং। তন্তানন্ত-লভ্যানাং স্থানাং পারদূখনো যুনেহপি বিবরণরাষ্ট্রখং মনো বভূব। অধৈকদা বাহ্যজনহানবর্জিতং তম্পন্যত্ৰ প্রতিহারী বিনয়ানব্রা ব্যজিজ্ঞপৎ। দেব কাচিচগুলকন্তকাহশ্চর্চাবহং শুকমাদায় দেবদর্শনলালসা তম্পারনৌকর্তুং দেবপাদমূলমাগতা।

(b) তথৈত্যান্ত্ৰী নলো দময়ন্ত্যা নিবেশং জগাম। তত্র বপুৰা দেদীপ্যমানাং স্কুমারাজীং তনুমধ্যাং বদনকান্ত্যা চন্দ্রমসমপি প্রত্যাদিশস্তীং সখীগণসমাবৃত্তাং তাং দৃষ্ট্ৱা তন্ত কামো ববুধে। সত্যনিষ্ঠন্ত কথং কথমপি তমধারয়ং। নলপ্রতিমরূপং দৃষ্ট্ৱা সখ্যা বিশ্লিষ্টাঃ কিঞ্চিদপি ব্যাহতু-মক্ষমা অভবন্। দময়ন্তী তু স্মিতপূৰ্ণা নলমভ্যভাষত। সৰ্বানবচ্ছাদ বীর, কণ্ঠঃ কুতঃ সমাগতঃ কথং চাত্ৰালকিতন্তে প্রবেশঃ। ইদং বেদ্য স্মরকিতং বর্ততে রাজা চোত্রশাসন ইতি।

(c) একদা ভীমূতবাহনো মিত্রাবহ্ননঃ সহ সমুদ্রবেলাং ত্রষ্টুং গতন্তমুবাচ। শয্যা শাঙ্কলং আসনং গুচিশিলা, সন্ম দ্রমাণামধঃ, শীতং নিখরবারি পানং, কমলা অশনং, যুগাঃ সহায়ী ইতোবম-প্রার্থিতলভ্যসর্ববিভবে বনেহয়মেবৈকো দোষো যদ্প্রাপ্যার্থিজনে তস্মিন্ পরার্থঘটনাবকৈঃ স্থীয়তে ইতি। ততো যাবজ্জলপ্রসরণমার্গাদপক্রম্য গিরিসামুসমীপমার্গেণ পর্য্যক্রামন্তাবজ্জীমূতবাহনো নাগানামহিসংখাতাম্ শিখরাকারানপশুং। তানন্তরেণ পুষ্টো মিত্রাবহ্ননুবাচ।

2. (a) Form *sandhi* in any *three* of the following :—

দিক্ + নাগঃ ; পরিত্রাট্ + ণেতে ; তেজঃ + বিন্ ; তব + ঋকিঃ, অম্ + অর্ভকৌ।

(b) Decline any *three* of the following :—

অপ্ in প্রথমা ; পুষ্ in দ্বিতীয়া (plural) ; ত্রি (feminine in বতী (plural) ; স্বগণ in সপ্তমী (plural) ; অহি in সপ্তমী (singular).

(c) Conjugate any *three* of the following :—

হ in লট্ ; তন্ in লিট্ ; ভিদ্ in লোট্ ; দা in লুট্ ; গম্ in লুঙ্

(d) Frame sentences to illustrate the following :—

(i) কর্ত্তব্যবচনীয়বোধে দ্বিতীয়া।

- (ii) হেতো তৃতীয়া ।
- (iii) অনাদয়ে ষষ্ঠী ।
- (iv) নির্দ্বারণে সপ্তমী ।

(e) Dissolve the *samāsas* in any *four* of the following naming and explaining the nature of each :—

প্রত্যহম্ ; গোহিতম্ ; কাপুরুষঃ ; দেবপুত্রকঃ ; কেশাকেশি ; পাণিপাদম্ ।

3. Correct or justify any *four* of the following, giving your reasons for corrections :—

- (a) গ্রামে অধিবসন্ স মাং দ্রুহতি ।
- (b) মে প্রিয়সখা রাম ইদানীমত্রৈব বর্ততে ।
- (c) যো নিশ্চেষ্টো গৃহে অধ্যাক্তে স কিম্ স্মৃৎ সন্তিষ্ঠতি ।
- (d) রামঃ প্রাতে জাগ্রতি, উথায় কিঞ্চিৎ ভুঞ্জতে চ ।
- (e) গংগায়্য প্রাতঃস্নানং কুর্বাণ বিশ্রো শ্রোতেন নেয়মানাং মক্ষিকাং দৃষ্ট্বা কৃপয়া তমুচ্চরৎ ।
- (f) অশ্বে, দেবদর্শনার্থং কেন পথেন গমিষ্যে ।

GROUP B

1. Write notes on any *two* of the following :—Asvaghosha, Kalidasa, and Bhavabhuti.

2. What do you know of any *five* of the following works :—*Mricchhakatika*, *Panchatantra*, *Mitakshara*, *Rajatarangini*, *Kathasaritsagara*, *Sahityadarpana*, *Gitagovinda* ?

3. Give an account of the lyrical poetry in Sanskrit.

4. Write a note on 'the art of writing and the transmission of Indian literature.'

5. Determine 'the Age and History of the *Mahabharata*.'

1934

SANSKRIT—PASS

First Paper

1. Render freely into English, so as to bring out the full sense as clearly as possible, *one* from Group A and *one* from Group B.

GROUP A

- (a) বেদঃ স্মৃতিঃ সদাচারঃ স্বস্ত চ প্রিয়মান্বনঃ ।
এতচ্চতুৰ্বিধং প্রাহঃ সাক্ষাৎকৃত্য লক্ষণম্ ॥
- (b) নৈত্যকে নান্ত্যনধ্যায়ো ব্রহ্মসত্রং হি তৎস্বতম্ ।
ব্রহ্মাহতিহৃতং পুণ্যমনধ্যায়বষট্ কৃতম্ ॥
- (c) নাত্ৰাক্ষণে গুরো শিষ্টো বাসমাতান্তিকং বসেৎ ।
ব্রাক্ষণে চাননুচানে কাঙ্কন্ গতিমহুস্তমাম্ ॥

GROUP B

- (a) গতং তিরশ্চীনমনুরসারথে প্রসিক্তমুজ্জ্বলনং হবিভূজঃ ।
পতত্যধো ধাম বিসারি সৰ্ব্বতঃ কিমেতদিত্যাকুলমীক্ষিতং জনৈঃ ॥
- (b) স বাল আসীষপূবা চতুৰ্ভূজো মুখেন পূৰ্ণেন্দুভিত্তিলোচনঃ ।
যুবা করাক্রান্তমহীভূচ্চকৈরসংশয়ং সম্প্রতি তেজসা রবিঃ ॥

2. Explain in English, *two* of the following, by translating freely, and adding the context and short notes in each case :—

- (a) উপকত্রীরিণা সন্ধিন মিত্রেণাপকারিণা ।
উপকারাপকারো হি লক্ষ্যঃ লক্ষণমেতয়োঃ ॥
- (b) নালম্বতে দৈষ্টিকতাং ন নিবীরতি পৌরষে ।
শকার্ধো সৎকবিবিব স্বয়ং বিদ্বানপেক্ষতে ॥
- (c) ধৰ্ম্মাবিরোধিত্ব কৰ্ম্মকামাবপি সেবিতব্যৌ—ন তদ্বিরোধিনৌ । তথা চ গৌতমঃ—

“ন পূৰ্ব্বাহ্ন মধ্যাহ্নিনাপরাহ্নানকালান্ কুৰ্যাদ্ যথাশক্তিধৰ্ম্মার্থকামৈঃ” ইতি ।

3. Discuss in English or Sanskrit any *two* of the following :—

- (a) Reconcile ধৰ্ম্মংজিজ্ঞাসমানানাং প্রমাণং পরমং ক্রতি । with
বেদোহথিলো ধৰ্ম্মমূলং স্মৃতিশীলো চ তদ্বিদাম্ ।
আচারশ্চৈব সাধুনামান্বনস্তিৱেব চ ॥

(b) Why should Sisupala be punished by Krishna according to the message delivered by Narada ?

(c) How could Krishna fulfil the wishes of the gods completely by going to the horse-sacrifice ?

4. (a) *Either*, Point out the कर्तृपद of आहः in Question 1 A (a).

Or, Point out the कर्तृपद of मृतम् in Question 1 A (b).

(b) *Either*, Derive अनुचाने *or* expound the *samasa* in अनुवृत्तम् in Question 1 A (c).

(c) Derive *either* तिरश्चीनम् *or* ईक्षितम् (indicating the proper वाच) in Question 1 B (a).

(d) *Either*, What is the allusion in अनुकसारणे in Question 1 B (a).

Or, What is referred to by नैताके in Question 1 A (b), and why is that नैताक ?

(e) *Either*, Explain fully why वपुषा is in तृतीया in वपुषा चतुर्भुजः ।

Or, Discuss the neuter gender in असंशयम् ।

(f) *Either*, Distinguish grammatically between पूर्वान्ते and पूर्वान्ते ।

Or, Discuss grammatically the propriety of the usage उपकारापकारौ हि...लक्ष्मम् ।

5. *Either*, Name and explain the metre in गतं तिरश्चीनम् &c.

Or, Explain the terms अति, ग्रामा and मूहना as used in connexion with the music given out by the *vina* of Narada.

Or, Explain अथर्व, व्याहृति, and त्रिपदा सावित्री ।

6. Translate into Sanskrit A. B. and C :—

A

Listen, you, O prince. I was once in previous birth the king of the heavenly musicians (*gandharras*). My personal charms and melodious voice attracted everybody. I became inordinately proud. I moved freely in the celestial regions. One day I met Narada on the way. I was in a hurry ; but the sage stopped me.

B

These (books) are friends that are never met with new faces ; they are the same in wealth and poverty, in glory and obscurity.

C

Happy the man, and happy he alone,
Who can call today his own.

SANSKRIT—PASS

Second Paper

1. *Either*, Explain the plan devised by Chanakya to bring about a rupture between Rakshasa and Malayaketu.

Or, Give the substance of the feigned quarrel between Chanakya and Chandragupta. What purpose does it serve ?

2. (a) ক বয়ঃ ক পরোকমগ্ধো যুগশাবৈঃ সমমেধিতো জনঃ ।

পরিহাসবিজলিতং সখে পরমার্থেন ন গৃহ্যতাং বচঃ ॥

By whom and in what connexion is the *sloka* uttered ? What is its far-reaching effect ?

(a) Reproduce or give in Sanskrit the the substance of the *sloka* containing the message of Kanva to Dushyanta.

3. Translate into English any *five* of the following :—

(a) রাজন্ সমিধাহরণায় প্রস্তুতা বয়ম্ । এষ খলু কাশ্যপন্ত কুলপতেঃ অনুমালিনীতীরম্
আশ্রমো দৃশ্যতে । ন চেষজ্জকার্য্যতিপাতঃ প্রবিষ্ট প্রতিগৃহ্যতামাতিথেয়ঃ সংকারঃ ।

(b) সরসিজমহুবিক্রং শৈবলেনাপি রমাং

মলিনমপি হিমাংশোল্লস লম্বীং তনোতি ।

ইয়মধিকমনোজ্ঞা বক্সেনাপি তরী

কিমিব হি মধুরাণাং মণ্ডনং নাকৃতীনাম্ ॥

(c) সাক্ষাৎ প্রিয়ামুপগতামপহার্য পূর্ব্বং

চিত্রাৰ্পিতামহমিমাং বহুমন্তমানঃ ।

শ্রোতোবহাং পথি নিকামজলামতীত্য

জাতঃ সখে প্রণয়বান্ যুগভূষিকারাম্ ॥

(d) হুণ ও মহাভাণ্ড এসা অবরাইআ গাম ওসহী ইমন্ম জাদকন্সসমএ ভাবদা মারী
এণ দিম্মা। এবং কিল মাতাপিতরা অগ্নাণং চ বজ্জিন্ন অবরো ভূমিপড়িয়ং ণ গেষহই।

(e) আশ্বাদিতধিরদশোণিতশোণশোভাং

সঙ্কারণামিব কলাং শশলাহ্ননস্ত।

ভৃক্তাবিদারিতমুখস্ত মুখাং ক্ষুরন্তীং

কো হর্ষমিচ্ছতি হরেঃ পরিত্যজ্য দংষ্ট্রাম্ ॥

(f) পরার্থামুষ্ঠানে রহয়তি নৃপং স্বার্থপরতা

পরিত্যক্তস্বার্থী নিয়তমথার্থঃ ক্ষিতিপতিঃ।

পরার্থশ্চেৎ স্বার্থাদভিমততরো হস্ত পরবান্

পরায়ন্তঃ ক্রীতেঃ কথমিব রমং বেত্তি পুরুষঃ ॥

(g) বিপর্যাস্তং সৌধং কুলমিব মহারন্তরচনং

সরঃ শুকং সাধোহর্দয়মিব নাশেন হ্রস্বদাম্।

ফলৈহীনান্ বৃক্ষা বিগুণবিধিযোগাদিব নয়ান্-

সুগ্ণৈরাচ্ছন্নান্ ভূমিমাতিরিব কুনীতৈরবিদ্বজঃ ॥

4. (a) Write an explanatory note on কুলপতিঃ।

(b) Comment on the *samasa* in অনুমালিনীতীরম্, শ্রোতাবহাঃ and
হ্রস্বদাম্।

(c) Derive শুক।

(d) Use a desiderative form for হর্ষমিচ্ছতি।

5. Explain with reference to the context, any three of the
following :—

(a) সেবাং লাববকারিণীং কৃতধিয়ঃ স্থানে স্ববৃত্তিং বিদ্বঃ।

(b) মুণ্ডিতমুণ্ডো নক্ষত্রাণি পৃচ্ছসি ?

(c) পুরস্ক্রীণাং প্রজ্ঞা পুরুষগুণবিজ্ঞানবিম্বী।

(d) সমানয়ন্তল্যগুণং বধুবরং চিরন্ত বাচ্যং ন গতঃ প্রজাপতিঃ।

(e) বয়স্ত, রক্তোপনিপাতিনোহনর্থা ইতি বহুচ্যতে তদ্ অব্যভিচারি বচঃ।

Account for the singular number in বধুবরম্ and parse চিরন্ত।

6. Give in Sanskrit the meaning of any six of the following ex-
pressions as used in your texts :—

অভিসন্ধান্ ; প্রত্যাদেশব্যলীকম্ ; বিচ্ছিত্তিশেষৈঃ ; শরবান্ ; জিতকাশী ; উপজাপঃ,
স্তবকরিতাঃ ; বাচিকম্ ; উপাংগুবধঃ ।

7. Translate into Sanskrit :—

Hearing this, the disciple thought to himself, 'On catching sight of such a one the heart of his mother is made happy, But by what can every heart attain to lasting happiness and peace'? And to him whose mind was estranged from sin the answer came, 'When the fire of lust is gone out, when the troubles of mind arising from pride, hatred, and other sins have ceased, then peace is gained'.

SANSKRIT—PASS

Third Paper

GROUP A

1. Translate into English any *two* of the following extracts :—

(a) রাজমহিষ্যঃ প্রারব্ধবৃত্তা বিলেহুঃ । সৰ্ব্বতশ্চ নৃতাতঃ স্নেহস্ত গলন্তিঃ পাদালন্তকৈররুণিতা
রাগময়ীৰ গুণ্ডভে ক্ষোণী । সমূলসন্দিঃ স্তনমণ্ডলৈর্মঙ্গলকলশময় ইব বভূব মহোৎসব । ভুজলতানাং
বিক্ষেপৈশ্চূর্ণালভয় ইব ররাজ জীবলোকঃ । সমূলসন্দিবিলাসম্মিতৈস্তড়িয়ায় ইবাক্রিয়ত কালঃ ।
চলতাং চক্ষুৰামণ্ডলিঃ কৃকসারময়া ইবাসদ্যাসরাঃ ।

(b) হৃদয় প্রসাদ প্রসাদ । কিমমুনাসমাত্মকলকেন দুলভজনপ্রার্থনামুবন্ধেন । অশ্রুত
যেনৈব দুষ্টেনৈতাদৃশঃ সন্তাপো নমু বধতে পুনরপি তং জনং প্রেক্ষিতুমভিলষসীত্যাহো তে
মুঢ়তা । অয়ি নৃশংস হৃদয় জন্মতঃ প্রভৃতি সহসংবর্জিতমিমাং জনং পরিত্যজ্য স্বর্ণমাত্রদর্শনপরিচিৎ
জনমমুগচ্ছং কথং ন লজ্জসে । অথবা কন্তব দোষঃ । অনঙ্গশরপতনভীতেন ত্বয়ৈবমচ্চ ব্যবসিতম্ ।
ভবতু তাবৎ । অনঙ্গমূপালপে । (সাত্ত্ব) ভগবনকুহুমায়ুধ নিভিতসকলহুহুরো ভূত্বা কথং
স্বীজনং প্রহরন্ত লজ্জসে ।

(c) রাজা চ শাস্ত্রমুর্ছিজবচনোৎপন্নপরিবেদনশোকশুনত্রাক্ষণানগ্রীকৃত্যাগ্রাজরাজ্যপ্রদান-
পরায়ণ্য জগাম । তদাশ্রমমুপগতাশ্চ তমবনীপতিপুত্রং দেবাপিমুপতন্তুস্তে ব্রাহ্মণা বেদবাদামুবন্ধানি
বচাসি রাজ্যমগ্রে তেন কর্তব্যমিত্যর্থবস্তি তমুচুঃ । অসাবপি বেদবাদবিরোধযুক্তিদুর্বিতমনেক-
প্রকার্য তানাহ । তত্তন্তে ব্রাহ্মণাঃ শাস্ত্রমুচুঃ । আগচ্ছ ভো রাজন । অলমত্রোতিনির্বন্ধেন ।
প্রশান্ত এবাসাবনাবৃষ্টিদায়ঃ । পতিতোয়মনাদিকালমহিতবেদবচনদুষণোচ্চারণাং । পতিতে চাগ্রজে
নৈব পরিবেশ্য ভবতীত্যুক্তঃ স্বপুত্রমগতা রাজ্যমকরোৎ । দুৰ্বিতে চ জ্যেষ্ঠে তস্মিন্বেবাপাবিল-
সত্যনিপাত্তয়ে ববর্ষ ভগবান্ পঙ্কজঃ ।

1. (a) Form *sandhi* in the following :—প্রাতঃ+গচ্ছ; হরয়ে+এবঃ; বালকো+অমৃঃ; তৎ+শ্লোকঃ; and তৎ+টীকা।

(b) Decline the following :—মাস in the locative case; ঠৈ in the accusative case; অশ্বজ্ in the nominative case; অহি in the locative case; শূ in genitive case; ইদং (feminine) in the instrumental case.

(c) Conjugate the following :—কৃ in লট্; বস্ in লিট্; অস্ in লোট্; শৃ in লঙ্; বৃ in বিধিলিঙ্; লভ্ in লৃট্ (all in the third person).

(d) Derive the following words :—আসীন; বিশ্বস্; প্রেষ্ঠ; আন্ত; স্মৃত; যুয়ুধান; and জঙ্ঘ।

(e) Substitute single words for the following :—পুনঃ পুনঃ নৃত্যতি; পতিভূ-মিচ্ছতি; আয়নঃ পুত্রমিচ্ছতি; ছাত্র ইবাচরতি; and ছাত্রং করোতি।

(f) Dissolve the *samasas* in the following :—স্বাতামুলিপ্তঃ; অহিনকুলম্; পরোক্ষম্; অহর্দিবম্; অনুগঙ্গম্; and দ্বিগুঃ।

3. Correct or justify any *three* of the following :—

(a) মহারাজা শত্রং বিজয়তি।

(b) গ্রামে অধিবসন্ সো মাং ক্রহতি।

(c) অশ্বে শিবদর্শনায় কেন পথেন অহং জগাম।

(d) মে কর্ণেণ কিং ভবতীতি হে প্রিয়সখে ত্বং মম্বসি।

Group B

1. Write notes on any *three* of the following :—Asvaghosha, Bhavabhuti, Rajasekhara, Sriharsha, and Kumarila.

2. What do you know of any *four* of the following works :—*Swapna-Vasavadatta*, *Setubandha*, *Gita-Govinda*, *Panchatantra*, *Prabodha-chandrodaya*, *Mahanataka*, and *Mahabhashya*.

3. *Either*, Discuss the age of the *Ramayana*.

Or, Describe briefly the *Puranas* and their position in Indian literature.

1935

SANSKRIT—PASS

First Paper

Q. 1. Either, Give in English or Sanskrit the main points in the message from Indra to Krishna as delivered by Narada.

Or, Explain fully in English or Sanskrit the main points in the speech of Balarama in the council chamber.

Q. 2, Either, Explain fully in English or Sanskrit Manu's conception of *dharma* and its source or sources.

Or, Explain fully the duties of a *naishthika* (नैष्ठिक) Brahma-charin, and the merit that accrues from such Brahmacharya.

Q. 3. First indicate the context in, then render freely into, English, and finally add short explanatory notes on, (a) and (b).

(a)

Either,

নবানধোহধো বৃহতঃ পরোধরান্
সমুচ্চকপূরপরাগপাগুরম্ ।
কণাংকণোৎকিণ্ডগজেন্দ্রকুণ্ডিনা
ক্ষুরোপমং ভূতিসিতেন শঙ্কুনা ॥

Or

পতৎপতঙ্গপ্রতিমন্তপোনিধিঃ
পুরোহিত যাবন্ন ভুবি ব্যলীয়ত ।
গিরেন্তুড়িধানিব তাবদ্রুতকৈ-
র্জবেন পীঠাদ্ভদ্রতিষ্টদ্যুতঃ ॥

(b)

Either,

তেষু সমাধ্বর্তমানো গচ্ছতামরলোকতাম্
যথা সংকল্পিতাংশ্চেহ সর্বান কামান্ সমধ্বতে ।

Or

অপাং সমীপে নিরতং নৈত্যকং বিধিমাহিতঃ
সাবিজীমপ্যধীরীত গম্ভীরগ্যং সমাহিতঃ ॥

4. Give a free translation into English of any two of the following verses, indicating in each case the context :—

- (a) হরতায় সশ্রুতি হেতুরেতঃ
 শুভস্ত পূৰ্বাচরিতৈঃ কৃতং শুভৈঃ ।
 শরীরভাজাং ভবদীয়দর্শনম্
 ব্যনক্তি কালজিতয়েহপি যোগ্যতাম্ ।
- (b) সঙ কিশুস্ত্রাপাতোহসৈব বাক্যস্তার্থগরীয়সঃ ।
 হুবিস্তরতরা বাচো ভাষ্যভূতা ভবন্ত মে ॥
- (c) ভবৎপূৰ্বং চরেদ্ ভৈক্ষুপনীতো বিজোন্তমঃ ।
 ভবন্মধ্যাঃ তু রাজশ্চো বৈশ্বশ্চ ভবদ্বতরম্ ॥

5. Either, Explain and illustrate the full forms of the names of the members of the four castes.

Or, Fix the proper time for the investiture of the sacred thread in the case of each of the three higher castes.

6. (a) Account for the case-ending in পরোধরান্ ক্ষণম্, and শত্ৰুনা in Question 3 (a).

(b) Expound the *samayas* in কণোংকিশুগজেন্দ্রকুণ্ডিনা and পতংপতঙ্গপ্রতিমঃ in Question 3 (a).

(c) Derive any three of the following :—সমুচ্চ, পতঙ্গ, তড়িৎ, নৈত্যকম্, সমাহিতঃ ।

(d) Either, Derive বিস্তর and explain why it cannot be বিস্তার in the case of হুবিস্তরতরা বাচো ।

Or, Account for the comparative degree in গরীয়সঃ in Question 4 (b).

7. Either, Bring out fully in Sanskrit the meanings of তেতু সম্যক্ বর্তমানঃ &c. in Question 3 (b).

Or, Explain in Sanskrit the full implication of হরতায়ম্ &c. in Question 4 (a)

8. Translate into Sanskrit any five of the following :—

(a) What a terrible night ! The darkness was impenetrably thick all round.

(b) But the traveller must reach his destination ; he must advance along the way.

(c) Presently a furious storm was raging there, terribly shaking the bigger trees, and uprooting the smaller ones.

(d) The whole passage was blocked now ; any farther advance was impossible.

(e) The traveller was in a sad plight ; he could neither advance nor retrace his steps.

(f) Absolutely helpless, he sat still on the ground and prayed to God.

(g) God listened to his prayers ; the whole scene was changed, in the twinkling of an eye.

SANSKRIT—PASS

Second Paper

1. Translate into English any four of the following verses :—

- (a) যদালোকে মূৰ্ছাং ব্রজতি সহসা তদ্বিপুলতাং
 বদন্তবিস্মিতং ভবতি কৃতসঙ্কানমিব তৎ ।
 প্রকৃত্যা বদ বক্রং তদপি সমরেখং নয়নরো-
 নমে পার্শ্বে কিঞ্চিৎ ক্షণমপি ন দূরে রথজবাং ॥
- (b) অনবরতধর্ম্মজ্যাকালনক্ৰপূর্বং
 রবিকিরণসহিতু ষ্ণেদলেশৈরভিন্নম্ ।
 অপরিচিতমপি গাত্রং ব্যায়তত্বাদলক্ষ্যং
 গিরিচর ইব নাগঃ প্রাণসারং বিভর্ত্তি ॥
- (c) রম্যাস্তরঃ কমলিনীছরিতৈঃ সরোভি-
 শ্ছায়াক্রমৈনিরমিতাকর্ম্মমুখতাং ।
 ভূয়াং কুশলয়রজোঃ মৃদুরেণুদন্তাঃ
 শান্তানুকূলপবনশ্চ শিবশ্চ পছাঃ ॥

- (d) অশ্মাৎ পরং বত বধাশ্রুতি সত্ত্বতানি
কো নঃ কুলে নিবপনানি নিবচ্ছতীতি ।
নুনং প্রস্তুতিবিকলেন ময়া প্রসিদ্ধং
ধৌতাশ্রশেষমুদকং পিতরঃ পিবন্তি ॥
- (e) ইয়ং গেহে লক্ষ্মীরিয়মমৃতবন্তিন যনয়ো-
রসাবস্তাঃ স্পর্শো বপুষি বহলশচন্দনরসঃ ।
অয়ং কঠে বাহুঃ শিশিরমহণো মৌক্তিকসরঃ
কিমস্তা ন প্রয়ো যদি পরমসহস্র বিরহঃ ॥
- (f) ত্বং বহ্নিমূনয়ো বশিষ্ঠগৃহিণী গন্ধা চ যন্তা বিদু-
র্নাহাশ্মাৎ যদি বা রবোঃ কুলগুরুর্দেবঃ স্বয়ং ভাস্করঃ ।
বিভাং বাগিবি যামহুত ভবতী তদন্তু যা দৈবতং
তন্ত্রাস্ত্বং দুহিতুস্তথাবিশসনং কিং দারুণেহমৃষ্যাথাঃ ॥
- (g) বয়মপি থেষেবং প্রায়াঃ ক্রতুপ্রতিবাতিনঃ
ক ইহ চ গুণৈস্ত্বং রাজানং ন বা বহুমন্ততে ।
তদপি থলু মে স ব্যাহারন্তুরঙ্গমরকিণাং
বিকৃতিমথিলক্ষত্রাক্ষেপপ্রচণ্ডতয়াহকরোং ॥
- (h) যোরং লোকে বিততমবশো যা চ বহির্বিষুঙ্কি-
লক্ষাষীপেকথমিব জনস্তামিহ শ্রদ্ধধাতু ।
ইন্দ্রাকুণাং কুলধনমিদং যং সমাধীনীয়ঃ
কৃৎস্নো লোকস্তদতিগহনং কিং স বংসঃ করোতু ॥

2. (a) Parse প্রকৃত্য in (a) and বধাশ্রুতি in (d).

(b) Drive বশিষ্ঠ and প্রেয়ঃ ।

(c) What is the root of বিতত ? Give its third person singular লুঙ form.

(d) Comment on the *samasa* in কুশেশয় ।

(e) Give the nominative plural form of রবিকিরণসহিষ্ as used in (d).

(f) Change the voice of the first half either of (g) or of (h).

3. (a) Either, give the substance of the messages of Vasistha delivered by Asatavakra to Rama and Sita.

Or, Narrate the causes of the obstacle of study occurring to Atreyi.

(b) Who was Matali? With what mission did he come to Dusyanta? How does he describe the purpose of his tussle with the Vidusaka?

(c) Quote or give in Sanskrit the substance of the *sloka*, describing either the merits of যুগল or the natural artfulness of women.

4. Write explanatory notes on any three of the following :—

যষ্ঠাংশবৃত্তে; দ্বাদশধাহিতস্ত তেজস; ; পদবাক্যপ্রমাণতত্ত্বজ্ঞ; ; পুটপাকপ্রতীকাশ; ;
ব্রহ্মপারায়ণম্.

5. Explain with reference to the context, any three of the following :—

- (a) শ্রিয়া দুরাগঃ কথমীপ্সিতো ভবেৎ ।
- (b) তমন্তপতি ধর্ম্মাংসৌ কথমাবির্ভবিশ্রুতি ।
- (c) শ্রদ্ধা বিস্ত্রং বিধিচ্ছতি ত্রিতয়ং তং সমাগতম্ ।
- (d) রহস্যং সাধুনামনুপাধি বিস্তৃকং বিজয়তে ।
- (e) কমিতোবং পৃচ্ছস্য নাধিগতরামায়ণ ইব ।
- (f) ভিত্তে বা সন্ধুস্তমীদৃশস্য নির্দ্বাণস্য ।

Account for the absence of যদী in শ্রিয়া in (a).

6. Render into Sanskrit any two of the following Prakrit passages.

- (a) জানামি, অজ্ঞউত্ত, কিন্তু সল্লাবস্মারিণে বদ্ধঅণবিপ্ল ষোঅ। হোন্তি ।
- (b) হকী হকী তাইং-এক চিরপরিচিহাইং অক্খরাইং পকবটীদংসণেণ পুণে। বি মং মলভাইণিং
অনরককন্তি ।
- (c) তেন লহ পরিভাঅদ্র গং ভবাং মা কর্ম বি তবস্মিণে হৈথ পড়িহিই ।
- (d) অহং জেণ ইট্টিপহ্মারং মারিয়ে। সো ইমিণা সাঅএণ অহিণলীঅই ।
- (e) স্তঅঅ মুকীঅউ এসো জালোবজীবী। উববদো কিল সে অসুলীঅঅম্ম
আঅমো ।

7. Translate into Sanskrit :—

(a) I am old and feeble. It is true, therefore, my body cannot go. But in my thought I always go there ; for my heart, O Brahmana, is joined to him.

(b) But if thy mind no longer finds delight
In sights and sounds and things that please the taste,
What is it, in the world of men or gods,
That thy heart longs for ? Tell me Kasyapa.

SANSKRIT—PASS

Third Paper

1. Translate into English any two of the following passages :—

(a) মনয়ঃ স্বাঃ ক্রিয়াঃ সমাপ্য শুভ্রববো যথাস্থানমুপাविशन् । অহমপ্যাক্ষবৃন্তাং শ্রবণোৎসুক-
শচাপলং বিহায় স্থিরমনা আসম্ । অথ ভগবাজ্জবালিঃ স্ববিষ্টরে স্থথাসিনো বক্তুং প্রচক্রমে ।
তপোধনা, ইমাং কথং দত্তাবধানাঃ শৃণুত । অবস্তি নু শুণসস্পৃশাং নির্ধিৰ্ভিত্তির্নির্জিতলকালকামরাবতী
নগৰ্ণুজ্জয়িনী নাম । যন্তাঃ কৈলাসনিবাস ঐতিমুহুৰ্ত্ততা ভগবতা মহাকালেন স্থিতিঃ ক্রিয়তে ।
তন্তাং ভরতভগীরথোপমন্তরাপীড় ইতি পৃথিবীপতিৰ্ভূব । তন্তামাতাঃ প্রজাবিশ্ববিহসিতদেবগুরুঃ
শুকনাসো নাম ব্রাহ্মণ আসীৎ ।

(b) বিধৃতকেশরসটাক্ষ সাটোপগৃহীতহরিতদূৰ্গাপল্লবকবলপ্রশস্তমুখপটেঃ সমহেষন্ত হুষ্টা
বাজিনঃ । সলীলমুতক্ষিপ্তহস্তপল্লবেনুতান্ত ইব শ্রবণহৃতগং জগজুর্গজাঃ । ববৌ চাচিরাচ্চক্রায়-
ধমুতম্ভজন্ত্যা লক্ষ্ম্যা নিখাস ইব সুরামোদমুরভির্দিব্যানিলঃ । যজ্ঞনাং মণিরেবু প্রদক্ষিণশিখাকলাপ-
কথিতকলাণাগমা প্রচ্ছলুধনিকনা বৈতানবহুয়ঃ ।

(c) শক্রাবতারাস্ত্রাস্তরবাসী কশিৎধীবরো জলোদ্গালাদিভিমন্ত্রবন্ধনোপায়েঃ কুট দত্তরপম-
করোৎ । একস্মিন্লিবসে তেন রোহিতমন্ত্রঃ খণ্ডশঃ কল্পিতঃ । তদা তন্ত্রোদারভ্যন্তরে রক্তাস্ত্রমুর-
মঙ্গলীয়ং তেন দৃষ্টম্ । পশ্চাৎক্রিয়ায় দর্শয়ন্নাগরিকেনরাজজ্ঞানেন গৃহীতঃ । তন্ত্রাস্ত্রলীককস্ত
বিশ্রগন্ধমাজ্জায় মন্ত্রোদরনংস্থিতমেব তদিতি নিশ্চিত্য ধীবরং প্রতিপালয়িতুং রক্ষিণাবাদিঞ্চ রাজ-
জ্ঞানো রাজকুলং জগাম । তত্র রাজ্ঞে যথাগমনমঙ্গলীয়কং নিবেশ্য রাজশাসনমাদায় প্রতিনিবৃত্তঃ ।

2. (a) Join according to *sandhi* rules any two of the following :—

অধাবিক্ ইজ্যেতে ইষ্টৌ অস্তাম্ ।

কঃ অস্ত্য পুনঃ ঈশ্বরাং শক্তঃ এতদ্ কর্তৃম্ ।

অমুস্মিন্ লোকে আচাৰ্য্যান্ শিষ্টা অভিবাদয়ন্তে ।

(b) Decline :—লক্ষ্মী in nominative singular; প্রথম (masculine) in nominative plural, হস্ত (masculine, *an arm*) in locative singular; পাদ (masculine, *a foot*) in instrumental plural; তিৰ্যচ্ (masculine) in locative plural, and পশিন্ in genitive plural.

(c) Conjugate any three of the following :—

জী in লট্; হ in লঙ্; গুপ্ in লোট্; বিদ্ (Parasmaipada, *to know*) in লিট্; গৃহ (Parasmaipada) in লুঙ্; and ঞ্ in বিধিলিঙ্।

(d) Derive the following :—সোঢ়া; গোটব্য; ধৌত; দায়িত্বাণ and বুঝাবিধীয়া।

(e) Expound the following :—কবয়তি; কবীয়তি; অশনায়তি; অশনীয়তি; অঙ্গরায়তে; স্থায়তে।

(f) Name and dissolve the *samasas* in any five of the following :—পিতরৌ; দেবানামপ্রিয়ঃ; কাপুরুষঃ; কৃষ্ণসংঃ; কমলাক্ষী; উপবিষ্ণু; চিত্রগুঃ and দণ্ডাদিগু।

3. Correct the following :—

(a) সা তপস্বিনী মংকুপাপাত্ৰং জাতম্।

(b) মা চোরানভৈষ্ট।

(c) ভক্তিং দেবো রোচতে।

(d) রামায় ষৌ পুত্রৌ আস্তাম্।

4. Write a note on any one of the following :—Either 'Social life as depicted in the *Atharva Veda*,' Or, 'The age of the *Veda*'.

5. Write a note on any one of the following :—Either, Ancient heroic poetry in the '*Mahabharata*'; Or, 'The genuine and the spurious in the '*Ramayana*'; or, The *Puranas* and their position in Indian literature'.

6. What do you know of any five—*Karyadarsa*, *Janakiharana*, *Navasahasankacharita*, *Brihatkathasaritsagara*, *Chaurapanachasika*, *Suryasaraka* *Vasavadatta* *pavanadutta*.

1936

SANSKRIT—PASS

First Paper

1. Either, Summarize the speech of Draupadi in which she tried her best to induce Yudhisthira and others to launch war against Duryodhana without losing time.

Or, Enumerate the ক্রোধ-বাসন as well as কামজ-বাসন as given by Manu.

2. Either, Under what circumstances may a king be engaged in war with his enemy.

Or, Discuss the remark of বনেচর made in বিভগ্নতে তেন নয়েন পৌরুষব্ ।

3. Explain either in English or in Sanskrit, with reference to the context, either Group A or Group B, and translate into English one *sloka* only from the group below which you do not explain :—

GROUP A

- (i) হুথেন লভ্যা দধতঃ কৃবীবলৈরকুটপচা ইব শস্ত্রসম্পদঃ ।
বিতৰ্হস্তি ক্ষেমমদেবমাতৃকাশ্চিরায় তস্মিন্ কুরবশ্চকাসতি ।
- (ii) যস্ত প্রসাদে পদ্মা ত্রিবিজয়ন্ত প্ররাজয়ে ।
মৃত্যুশ্চ বসতি ক্রোধে সৰ্ব্বভেজোময়ো হি সঃ ॥
- (iii) আয়ত্যাং গুণদোষজন্তদায়ে কিপ্রনিশ্চয়ঃ ।
অতীতে কার্যাদোষস্তঃ শত্রুভিনাভিভূয়তে ॥

GROUP B

- (i) উপজাসহান্ বিলজ্জবয়ন্ স বিধাতা নৃপতীন্ মদোকৃতঃ ।
সহতে ন জনৌহৃদ্যং ক্রিয়াং কিমু লোকাধিকধাম রাজকন্ ॥
- (ii) বকবচ্চিস্তয়েদর্ধান্ সিংহবচ পরাক্রমেৎ ।
বৃকবচাবলুপ্পেত শশবচ বিনিষ্পতেৎ ॥
- (iii) স রাজা পুরুষো দণ্ডঃ স নেতা শাসিতা চ সঃ ।
চতুর্ণামাশ্রমাণাং চ ধর্মস্তু প্রতিভূঃ স্তুতঃ ॥

Do you find any tautology in the *sloka* (ii) in Group A owing to the use of the words পদ্মা and ত্রি? If not, justify your statement. Account

for ई in कृषीबल; derive अकृष्टपद्या। What are the four अप्रसङ्गः referred to in *sloka* (iii) in Group B ?

4. Give explanatory notes on any four of the following, referring to the context in each case :—

(a) এবং বৃন্তস্ত নৃপতে: শিলোহেনাপি জীবত: ।

(b) ধ্বংসং মহীর্গং...সমাপ্রিত্য বসেং পুরম্ ।

(c) অহো ছরস্তা বলবদ্বিরোধিতা ।

(d) হিতং মনোহারি চ দুর্লভং বচ: ।

(e) বিপদস্তা হুবিনীতসম্পদ: ।

5. Write grammatical notes, with reference to the rules, on any three of the underlined words :—

(a) অদব্রদর্ভামবিশম্ স স্থলীম্ ।

(b) অপি বাগধিপস্ত দুর্বচ: বচনং তদ্বিদধীতে বিশ্বম্ ।

(c) ঐতম্যধিগম্য যে রিপুন্ বিনয়ন্তে ন শরীরজন্মান: ।

(d) স কিং সখা সাধু ন শান্তি যোহবিপম্ ।

6. Translate into Sanskrit any five of the following :—

(a) Daily during the warm season of the year she had repaired to that secluded spot near her dwelling to pray for her beloved son and her native country.

(b) He was overcome by the spectacle of his mother's grief, and with tears running down his cheeks, he replied, 'Mother ! I can never go and cause you so much grief.'

(c) 'Your patriotism is equal to your hospitality' replied the young man, 'and I am quite disposed to accept both in the circumstances.'

(d) But on that night a storm arose and a dense fog enveloped the mountains. Early in the evening the rain began to fall.

(e) Wherever you turn your eyes you see trees loaded with fine fruits : many of them, indeed, breaking down, while the ground is covered with sweet mangoes.

(f) Many boys never stop to think that they will soon be men, and so they are not fitted for the duties of manhood when they come.' This was the remark made by the schoolmaster.

(g) All hearts were melted by the child's artless exhibition of filial love and sorrow. He loved his father with a devotion that knew no bounds.

(h) I did wrong, mother, and I am sorry that I attempted to ride the horse. I hope that you will forgive me, and I will never be so disobedient again.

SANSKRIT—PASS

Second Paper

1. (a) Either, Give an outline of the contents of the seventh act of the *Uttararamacharitam*.

Or, Give the substance of the conversation between Tamasa and Murala in the third act of the *Uttararamacharitam*.

(b) Quote or give in Sanskrit the substance of the *śloka*s in which Sarngarava and Saradvata describe their feelings to each other on entering the city of Dusyanta.

2. Translate into English any **four** of the following.

(a) ভাব, প্রেৰিতা হি সগৃহাং মহারাজেন লঙ্কাসমরশুদ্ধো মহাস্থানঃ প্রবজ্জরাক্ষসাঃ
সভাজনোপহায়িনশ্চ নানাদিগন্তপাবনা ব্রহ্মৰ্ষয়ো রাজৰ্ষয়ো। রাজৰ্ষয়শ্চ যদাৱাধনায় ইয়তো দিবসান্
উৎসব আসীৎ।

(b) যথেষ্টং ভোগ্যং বা বনমিদমথং মে হৃদিবনঃ
সতাং সন্তিঃ সঙ্গঃ কথমপি হি পুণ্যে ন ভবতি।
তরাঙ্কায় তোয়ং যদপি তপসো বোগ্যমশনঃ
ফলং বা মূলং বা তদপি ন পরাধীনমিহ বঃ।

(c) অধেষ্টব্যো যদসি ভুবনে ভূতনাথঃ শরণ্যো
মামধিষ্ঠমিহ বুৰলকঃ যোজনানাং শতানি।
ক্রাঙ্খা প্রাপ্তঃ স ইহ তপসাঃ সন্তুসাদোহজ্ঞা চেষৎ
কারোধ্যায়াঃ পুনরূপগমো দণ্ডকায়াং বনে বঃ।

(d) অবনিরমরসিদ্ধুঃ সার্বমন্মদবিধাভিঃ

স চ কুলপতিরাশ্চক্ষুসাসাং যঃ প্রযোক্তা ।

স চ মূনিরমুখ্যাতারুণকতীয়েো বশিষ্ঠ—

স্ময়ি বিতরতু ভয়ং ভূয়তে মঙ্গলায় ॥

(e) অক্ষসন্ মহালাবজগণিণো বীস্যন্তো মং মন্তাবেই কদমো অজ্ঞেণ রাপসিবংসো
অলঙ্করীঅই কদমো বা বিহরপঙ্কুহু অজণো কিদো দেসো কিং গিমিত্ত বা হুউমায়দরো বি
তবোবগগমণপরিভ্রমন্ত অত্যাপদং উপনীদো ।

(f) ভূত্বা চিরায় চতুরন্তমহীসপত্নী

দৌত্তস্তিমপ্রতিরথং তনয়ং নিবেশ্ত ।

ভদ্রা তদর্পিতকুটুম্বভরণে সাক্ষং

শাস্তে করিষ্যসি পদং পুনরাশ্রমেহস্মিন্ ॥

(g) এষ হ্যমভিনবকণ্ঠশোণিতার্থী

শার্দূলঃ পশুমিব হস্মি চেষ্টমানন্ ।

আর্তানাম্ ভয়মপনেতুমাত্তথবা

দ্রুধ্যন্তন্তব শরণং ভবত্বিদানীন্ ॥

(h) তব ভবতু বীড়োজাঃ প্রাজ্যবৃষ্টিঃ প্রজাহ

ত্বমপি বিততযজ্ঞঃ সর্গিণঃ ঐশ্বর্যম্ ।

যুগশতপরিবর্ত্তানবমস্তোত্রকৃতো—

ন স্নতমুভয়লোকানুগ্রহপ্রাপ্যনীয়ে ॥

3. (a) Drive ইয়তা and আত ।

(b) Justify the use of সগৃহান্ in the plural in Question 1. 2 (a).

(c) Comment on the *samāsas* in আন্তথবা and হুহং । State, giving your reasons, whether we can dissolve তরুচ্ছায়া into তরশাং ছায়া ।

(d) To whom does অম্মদ্বিধাভি in Question 2 (d) refer ?

(e) Parse গতানি in Question 2 (c).

4. Give in Sanskrit the meaning of any six of the following expressions :—

নেপথ্যবিদ্বান্, প্রয়োগবিজ্ঞানন্ ব্রীড়াবিলক্ষঃ, অবচনীয়তা, অবশায়াবসিক্তসা, নিগমাস্তবিত্তান্
অন্ধতমসম্, বোজায়িতম্, অনুৎসেকিনী ।

5. Give either in English or in Sanskrit the substance of one of the following *slokan* and turn it into prose order :—

- (a) তত্ত্বাং প্রিয়জনবিরোগজন্মা
 তীব্রোপি অতিকৃতিবাঞ্চয়া বিসোঢ় ।
 দুখাগ্নির্মসি পুনর্বিপচ্যমানো
 দুঃস্বপ্নত্রয় ইব বেদনাং করোতি ।
- (b) যাতোকতোহন্তশিখরং পতিরোষধীনাম্
 আবিস্কৃতোহক্ষপুংসর একতোহর্কঃ ।
 তেজোহস্য যুগপৎ বাসনোদয়াভ্যাং
 লোকো নিরম্যত ইবাস্তদশান্তরেব ।

Give the third person singular *lit* form of the root of সোঢ় Change the voice of the second half of either of the *slokan*.

6. Explain, with reference to the context any two of the following :—

- (a) অনুভবতি হি মূর্খা পীদপত্নীত্রমুখং ।
 শময়তি পরিতাপং ছায়য়া সংপ্রিতানাম্ ॥
- (b) অবলতমসাম্ এবম্প্রায়াঃ শুভেবু হি বৃত্তয়ঃ ।
 শ্রজমপি শিরস্যাক্ষাঃ ক্ষিপ্তং ধুনতাহিশঙ্কয়া ॥
- (c) ভদ্রা চেযাং বাচি লক্ষ্মীনিষিক্তা ।
 নৈতে বাচং বিপ্লুতাং ব্যাহরন্তি ।
- (d) এষ সাংগ্রামিকো স্তায় এষ ধর্ম সনাতনঃ ।
 ইয়ং হি রঘুসিংহানাং বীরচারীত্রপদ্ধতিঃ ॥

7. Translate into Sanskrit the following passages :—

(a) If by the sacrifice of this body numberless people may be rendered happy, then, O brother, is this not the greatest gain ?

(b) Shame on the throne for the sake of which he was eager to save his life even by suffering insults from robbers and thieves.

(c) Let the disgrace alone ! But could this land, even for a short while, have been ruled by such a person on the throne, who was unfit even for being a slave ?

SANSKRIT—PASS

Third Paper

GROUP 1

1. Translate into English any two of the following passages :—

(a) অখোপেক্ষিতে বনীশ্রমাচারপ্রচারে প্রথমমপেক্ষণীয় ভবতি বেদবেদাঙ্গপ্রভৃतीনাং প্রাচীনশাস্ত্রাণাং সমাগালোচনম্ । শাস্ত্রাণাং সমাগ্ অমূলীনমন্তরেণ ন কদাপি বনীশ্রমাচারাণাং প্রচারঃ সম্ভবতি । অপেক্ষতে শাস্ত্রামূলীনং প্রগাঢ়বুৎপত্তিং সংস্কৃতভাষায়াম্ । সর্বাণি খলু শাস্ত্রানি সংস্কৃতভাষায়াম্ প্রণীতানি । বিনা সংস্কৃতজ্ঞানং চুলভমেব শাস্ত্ররহস্যজ্ঞানম্ । সংস্কৃতবুৎপত্তিং পুনরপেক্ষতে অতাপি শাস্ত্রালোচননিরতানাং বিদ্বদাং সহায়কম্ । ততশ্চ ভারতন্ত পূর্বগৌরব-মবস্থাপয়িতুমিচ্ছুতিঃ প্রথমমেব সংস্কৃতশাস্ত্রব্যবসায়ীনাং বিদ্বদাং ব্রাহ্মণানামাশ্রয়ো গ্রহণীয়ঃ, যথাশক্তি তेषাম্ আনুকূল্যং পুষ্টিশ্চ সাধনীয়ে ।

(b) ভগবতি ! জ্ঞপ্রসাদপ্রাপ্তি প্রীতাহিতেন কৃত্বহলেনা ক্লিক্রিয়মাণো মামুযতা শূলভা লঘিমা বলাদনিচ্ছন্তমপি মাং প্রশ্ন কর্ণপি নিয়োজয়তি । জনয়তি হি প্রভুপ্রশাদলেশোহপি । প্রাগলভ্যামবীর প্রকৃতেঃ । স্বভাৱপি একদেশাবস্থানে কালকলা পরিচয়মুৎপাদয়তী । তদ যদি নাতিখেদকরমিষ ততঃ কথমেনাঙ্গনমমুগ্রাহমিচ্ছামি । অতিমহৎ খলু ভবদধর্নাং প্রভৃতি মে কৌতুকমশ্মিন্ বিবয়ে । কতরং খলু কুলম্ভীনাং গন্ধার্বানাম গুহ্যকানামঙ্গরসাং বা অনুগৃহীতং ভগবত্যা জয়না ? কিমর্থং বাহ্মিনকুসুমকুমারে নবে বয়সি ব্রতগ্রহণম্ ? কেনং বয়ঃ ! কেয়মাকৃতিঃ ? কেয়মিল্লিয়ানা-মুপশান্তিঃ ? তদঙ্গুলমিষ যে প্রতিভাতি ।... আবেদয়তু ভবতী সর্বম্ অপনয়তু নঃ কৌতুকম্ ।

(c) নমস্কেবৈকব দুহিতা । জাতমাত্রায়াং তৃত্বাং জনন্যহাঃ প্রাপান্ অমৃৎ । মাতা চ পিতা চ ভূত্বা অহমেব ব্যবধর্যম্ । এতদর্থমেব বিদ্যাময়ং শুদ্ধমজ্জিতং গতোহুদ্র অবস্তি-নগরীমুজ্জয়িনীম্ অশ্বদ্বৈবাহকুলভঃ কোহপি বিপ্রদারকঃ । তস্মৈ চেয়মমুযতা দাতুম্ ইতরস্মৈ ন বোগ্যা । তরুণীভূতা চেয়ম্ । স চ বিলম্বিতঃ । তেন তমানীয় পানিমস্তা প্রাহ্মিষত্যা তস্মিন্ স্তম্ভভারঃ সংস্থসিবেৎ । দুর্ভারিকৃত্যা দুহিতৃণাং মূর্ত্যুশেষবান্, বিশেষতশ্চামাতৃকাণাম্, ইহদেবং প্রজ্ঞানামপন্নশরণমগতোহস্মি । যদি বুদ্ধমধীতিনং ব্রাহ্মণং চ মামমুগ্রাহপক্ষে গময়তি দেবঃ, সৈবা ভবদ্রজতরুহায়াম্ অখণ্ডিতচারিত্রা তাবদধাস্তাম্ । বাবদস্তাঃ পাণিগ্রাহকমানয়েয়ম্ ।

2. (a) Disjoin the *sandhis* in any two of the following :—

গুণাবতিভক্তিমার্জনশ্রীতিকরঃ কুমারঃ ।

পুনঃ পুনায়মতে বিষয়েষবিধান্ ।

সরিত্যব্যয়ম্ ।

(b) Decline any **six** of the following :—সখি in genitive singular ; অনড়্‌হ্ in nominative singular ; যুবন্ in instrumental singular ; অদস্ (masculine) in locative plural ; ত্রি (feminine) in genitive plural ; ত্রী in instrumental singular ; পুনর্ভূ in accusative singular ; রৈ in nominative singular.

(c) Conjugate any **three** of the following :—শাস্ in লট্ third person, singular and dual ; হ্রী (Parasmaipada) in লট্ third person, singular and plural ; ভিন্ (Parasmaipada) in লোট্ second and third person singular ; সেব্ in লিট্ third person singular and plural ; ক্ in লৃট্ (Parasmaipada) third person, singular and plural.

(d) Derive any **four** of the following :—পিপাস্ ; শোকাপমুদ্ ; বাস্তব্য ; পরস্তপ ; নিশাকর ; পণ্ডিতমগ্ন ; দাশরথি ; কোস্তেয় ।

(e) Substitute one word for any **four** of the following :—
পুত্রমিব আচরতি ; কুমারীবা আচরতি ; বৈরং করোতি । পরলোকে ভবম্ ; পুনঃ পুনর্ভূততি ; প্রযোক্তৃ শক্যঃ ।

(f) Comment *grammatically* on any **four** of the following underlined words :—প্রতিষ্ঠতে গৃহম্ ; উপক্রমতে বক্তৃম্ ; উদ্বপতে স পানিং ; বিবোধতি অবিবেকো ; নিষ্কাতো ব্যাকরণে ; লগ্নীবান্ বিনয়ী চ দুর্লভঃ ।

(g) Name and expound the *samasas* in any **four** of the following :—
তিষ্ঠদ্ব্য ; পঞ্চগবন্ ; সীতাজানি ; অহিনকুলম্ ; মহাবীরঃ । পূর্বকার ; পারগজন্ম ।

3. Correct the errors in any **four** of the following sentences :—

(a) দেবভূময়ং পাচয়তি যজ্ঞদত্তঃ ।

(b) শতঃ ধারয়তি মাং বিষ্ণুত্রিঃ ।

(c) ধর্ম্ম জিজ্ঞাসতি বিপ্রঃ ।

(d) স প্রাজ্ঞেরব রাজসমং গতবান্ ।

- (e) পিতরো পালয়েডেপতাম্ ।
 (f) ছবেৎ শিকং নাভিনন্দতি গুৰ ।

Group II

1. Either, write a short essay on the age of the *Mahabharata*.

Or, Give a short summary of the contents of the *Ramayana*, preferably canto by canto.

2. Write notes on one of the following :—

- (a) Brahmanical Myths and Legends in the *Mahabharata*.
 (b) The *Bhagavadgita* and its teachings.
 (c) The Purana Literature.

3. Write notes on any five of the following authors :—

Kumaradasa, Magha, Sandhyakara, Dandin, Bilhana, Jayadeva, Asvaghosa, Aryasura, Sriharsa.

1937

SANSKRIT—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable.

1. Either, How did Yudhisthira establish that to take immediate action against Duryodhana would be a ruinous policy, by refuting the arguments of Bhima and Draupadi who were in favour of marching at once ?

Or, Fully illustrate the *shloka* given below :—

বহুবোহবিনয়ন্তো রাজানঃ সপরিচ্ছদাঃ।

বনস্থা অপি রাজানি বিনয়াৎ প্রতিপেদিরে ।

Either, Describe the sort of person who should be engaged by a king as his messenger (দূত) ।

Or, Criticize the statement ‘निवसन्ति पराक्रमश्रया न विवादेन समं सङ्कयः ।’

3. (a) Explain either in English or in Sanskrit, with reference to the context, either group A or group B :—

GROUP A

- (i) प्रलीनभूपालमपि स्त्रियति
प्रशासदावारिधि मङ्गलं भुवः ।
सचिन्तयतेव भिरुन्देद्यतीरहो
द्वुरन्ता बलवच्चिरौधिता ।
- (ii) इन्द्रियाणं ज्ञयेयोगं समातिष्ठेद्विबानिशम् ।
जितेन्द्रियोहि शक्नोति वशे स्वापयितुं प्रजाः ।
- (iii) ब्यसनञ्च च मुत्तोऽच ब्यसनं कष्टमुत्तते ।
व्यसनञ्चोद्धोत्रजति स्वर्यातव्यसनी मृतः ।

GROUP B

- (i) अभिवर्धति योऽभूपालयस्त्रिबिजानि विवेकवारिणा ।
स सदा फलशालिनीं क्रियां शरदं लोकहर्षावितिष्ठति ।
- (ii) वयोद्धरतिनिर्दत्ता कक्षं धाञ्च च रक्षति ।
तथा रक्षेन्पौराष्ट्रं हन्ताच परिपश्चिनः ।
- (iii) नोद्धिन्त्यादाञ्जानं मूलं परेवां चातिहृष्या ।
उद्धिन्त्य हान्नो मूलमाञ्जानं ताञ्च पीडयेत् ।

Account for the absence of भुम् in प्रशासं, expound and name the samasa in आवारिधि in (i) Group A; account for the case-ending in इन्द्रियाणं in (ii) Group A and क्रिया in (i) Group B.

(b) Translate into English :—

- (i) अगुरुपुपहन्ति विग्रहः प्रभूमन्तः प्रकृतिप्रकोपजः ।
अथिलं हि हिनस्ति तूधरं तरुणाथान्ननिवर्धजोऽहनलः ।
- (ii) यदा परवलानाञ्च गमनीयतमोऽभवत् ।
तदातु संग्रयेत् किञ्च धार्मिकं बलिनं नृपम् ।

Derive the word underlined in (i) in Question 3 (b).

4. Write explanatory notes on any four of the following :—

- (a) ন বাধতেহন্তঃ ত্রিগণঃ পরস্পরম্ ।
- (b) মহোদয়েন্তন্ত হিতানুবন্ধিভিঃ প্রতীয়তে ধাতুরিবেহিতং কলৈঃ ।
- (c) প্রশমন্তানপায়মুখিতং প্রতিপচ্ছামিব অজা নৃপম্ ।
- (d) বরিষ্ঠমগ্নিহোত্রোত্তা ব্রাহ্মণস্ত মুখে হন্তম্ ।

অমায়ৈব বর্ভেত ন কথং চ ন মায়য়া ।

5. Write grammatical notes with reference to the rules on any three of the underlined words in the following :—

- (a) যজ্ঞেত রাজ কৃত্তুর্ভির্বিবিধৈঃ ।
- (b) নচৈনং ভূবি শক্রোতি কশিনপাভিবীকিতুম্ ।
- (c) স্বয়ং প্রহুঙ্কেহন্ত গুণৈরুপপন্নতা বনুপমানস্ত বনুনি মেদিনী ।
- (d) জটীধরঃ সন্ জুহুধীহ পাবকম্ ।

6. Translate into Sanskrit any five of the following :—

(a) The parents of the deceased had resided in the village from childhood. They had inhabited one of the neatest cottages and supported themselves by various rural occupations.

(b) To honour is to obey. We say we honour God. Nothing is so great a lie as this. Do we obey all His commandments? Can anybody lay his hand on his bosom and say so?

(c) Virtue brings contentment, cheerfulness, and peace of mind. A virtuous man has nothing to fear. He enjoys the protection of God. He is secured from all those ills which afflict a sinful man.

(d) When we see any rich man, we think how happy he is and we blame our own lot. But if we enquire into his condition, we shall see that he is not an object of envy but of pity.

(e) A beggar is a thousand times happier than he is. It will appear that in spite of all his riches, he cannot enjoy peace of mind. So here too our eyes deceive us.

(f) Great riches bring great cares. They cannot give us true happiness and real peace of mind. We cannot carry them away when we go out of the world, we have to leave them to be enjoyed by others.

(g) Enjoyment is for life like dew from heaven on flowers. The mind and body cannot be constantly kept engaged. They need rest. Even God Himself rested after the creation of the world.

SANSKRIT—PASS

Second Paper

Candidate are required to give their answers in their own words as far as practicable.

1. (a) **Either**, Narrate the incident which led Dusyanta to appear for the first time before Sakuntala and her friends. How did he introduce himself to them? When and how could they recognize him as the king?

Or, What facts do you gather from the conversation of Saudhakti and Bhandayana in the beginning of the fourth act of the *Uttaracharita*?

(b) Quote or give in Sanskrit the substance **either** of the *sloka* in which is described nature's gift of ornaments for Sakuntala **or** of that in which Sambuka extols the result of his penance,

2. Translate into English any **three** of the following *slokas* :—

(a) তুরগবিচরবাগ্নাবীভিদঃ সগরাক্ষরে

কপিলমহসামৰ্ধাং প্লুত্বান্ পিতুঃ প্রপিতামহান্ ।

অগণিততনুপাতং তপ্তা তপাসি ভগীরথো

ভগবতী তব স্পৃষ্টানঙ্কিচিরাহুদদীধরং ।

(b) আসীদিয়ং দশরথস্য গৃহে যথা ত্রিঃ

ত্রিরেব বা কিমুপমানপদেন সৈষা ।

কষ্টং বতান্তদিব দৈববশেন জাতা

দুঃখান্নকং কিমপি ভূতোমহো বিপাকঃ ।

- (c) ব্যতিবজ্জতি পদার্থানান্তরঃ কোহপি হেতু-
 ন' খলু বহিরূপাধীন প্রীত্যঃ সংশ্রয়ন্তে ।
 বিকসতি হি পতঙ্গস্তোদয়ে পুণ্ডরীকং
 ত্রবতি চ হিমরশ্মাবুলাতে চক্ৰকাস্তঃ ।
- (d) চিত্রে নিবেশ্য পরিকল্পিতসম্বোধোণা
 রূপোচ্চয়েন মনসা বিধিনা কৃত্য জ্ঞু ।
 স্ত্রীরত্নহৃদয়পরা প্রতিভাতি সা মে
 ধাতুর্বিভূত্বমমুচিস্ত্য বপুষ্ট তস্তাঃ ।
- (e) রম্যাণি বীজ্য মধুরাংশ নিশম্য শব্দান্
 পর্ব্যংমুকীভবতি বৎ সুখিতোহপি জন্তঃ ।
 তচ্চেতসা স্মরতি স্নানমবোধপূর্ব্বং
 ভাবস্থিরাণি জননান্তরসৌক্যদানি ।
- (f) আলঙ্কারস্তমুকুলান্ নিমিত্তহাসৈ-
 রব্যক্তবর্ণরমণীয়বচঃপ্রবৃত্তীন
 অঙ্ক্যশ্রয়প্রণয়িনস্তনয়ান্ বহন্তো
 ধাতান্তদঙ্গরজসা মলিনীভবন্তি ।

3. (a) Clear the allusion in verse (a) and give the derivative meaning of the word অক্ষর.

(b) Parse অগণিততনুপাতং and চিরাং in (a).

(c) What does উপমানপদ refer to in verse (b) ? Explain the expression as used here.

(d) Comment on the transitive use of ব্যতিবজ্জতি in (c) and conjugate its root in লুট্ and লিট্ (third person, singular).

(e) Justify the use of ঝাচ্ (লাপ্) in অমুচিস্ত্য in (d) and suggest an alternative form for সৌক্য in (e).

4. Explain fully, with reference to the context, any three of the following :—

- (i) তে হি মন্তে মহাত্মানঃ কৃত্যেনেদ দুঃখাননা ।
 নমা গৃহীতনামানঃ স্পৃশন্ত ইব পাপম্ভা ।

(b) পুরোংপীড়ে তড়াগন্ত পরীবাহঃ প্রতিক্রিয়া ।

শোককোভেব হৃদয়ং প্রলাপৈরেব ধার্যতে ।

(c) বিশ্বস্তরাপি নাম ব্যথতে ইতি জিতমপত্যম্বেহেন । যথা সর্বসাধারণোহ্বেষ
মোহগ্রস্থিরন্তরন্তরন্তেতনাবতান্ অনুপন্নবঃ সংসারতন্তঃ ।

(d) আশংসন্তে সমিতিষু সুরাঃ সন্তবরা হি দৈতৈ—

রস্তাধিজ্যে ধনুৰি বিজয়ং পৌরুহতে চ বজ্রে ॥

(e) ইয়ং থলু কথা মামেব লক্ষ্যাকরোতি । যদি তাবদন্তিশোনামতো মাতরং
পৃচ্ছামি । অথবা অনার্থ্যঃ পরদার পৃচ্ছাব্যাপারঃ ।

5. (a) What irregularity do you find in the *samasas* of গৃহীতনামানং, with the word ময়া remaining separate, in (a)? How would you justify it?

(b) Write grammatical notes on পরীবাহ and আশংসন্তে । Derive পৌরুহত ।

6. Render into Sanskrit either of the following Prakrit passages :—

(a) দাব এণং লজ্জাবণনদমুহিং পরিস্ফুজিয় সয়ং তানকস-স্বেণ একং অহিগন্ধিনং
দিট্টিয় ধুমাউলিদদিট্টিণো বি জজমাণস-ন্ পাবএ এক আহই পড়িলা । বজ্জে হুসিস্পরিদিণা
বিয় বিজ্জা অসোয়ণিজ্জা সংবৃত্তা ।

(b) হক্কী হক্কী দুসিস্বেণএণং বিম্বলক্কা অহং অজ্জউত্তং আকন্দামি । এয়াইনীং
মং পহুত্তং উজ্জিয় গাদো অজ্জউত্তো । কিং দানীং এদং । ভোহু সে কুবিসসং জই তং পেকথন্তী
অন্তণো পহবিসসং ।

7. Translate into Sanskrit any four of the following extracts :—

(a) He remained there several months studying Nyaya and other *sastras* under the direction of his preceptor at Mithila.

(b) He passed through a great forest and going southeast came to the kingdom of Andhra by the side of which is a great *asrama*.

(c) He then ordered the prince to rule the kingdom during his absence and himself went to reside in the temple of Mahesvara.

(d) Shortly after, the royal palace suddenly caught fire and was destroyed. The king said, I am not a pious ruler.'

(e) Seeing that you desire to sacrifice your life contrary to our wishes, I have come to dissuade you from your purpose.

(f) Worship Vishnu and you will soon get rid of your pain. If you loathe your body, there will be no cessation to your sufferings.

SANSKRIT—PASS

Third Paper

GROUP 1

1. Translate into English any two of the following passages :—

(a) তেবাং তংপিতৃবানপ্রহ্মাশ্রমগ্রহণোপক্রমনিষেধে ভূয়াং সমাগ্রহং বিলোক্য শ্বনিস্তানবদৎ—
‘ভোঃ কুমারকাঃ, অয়ং যুগ্মজনক এতদ্বয়ঃসমুচিতো পথি বর্তমানঃ কার্যক্ৰেণঃ বিনৈব মদাশ্রমহো
বানপ্রহ্মাশ্রমাপ্রয়ণং কুৰ্বন্ ভবন্তিন্ বারণীয়ঃ। অত্র হিতঃ সত্বরং ভগবন্ত্তিমূলপলম্প্যতে।
ভবন্তু পিতৃসন্নিধ্যে ন স্বমবাস্যন্তি’ ইতি। মহর্ষে রাজামধিগম্য তে পিতৃবানপ্রহ্মাশ্রমাদিগম-
প্রতিষেধোগ্রহমত্যাঙ্গন। রাজবাহনং পুষ্পপুরেহবহ্মাপা তদমুজ্জয়া সর্বৈষি পরিজনাঃ স্বানি স্বানি
রাজ্যানি প্রতিপাল্য স্বেচ্ছয়া পিত্রোঃ সমীপে গতগতমকুৰ্বন। এবমবস্থিতান্তে রাজবাহনপ্রমুখাঃ
সর্বৈষি কুমারা রাজবাহনাজ্জয়া সর্বমপি বহুধাবলয়ং জ্ঞায়েন পরিপালয়ন্তুঃ পরম্পরমৈকমতোন
বর্তমানাঃ পুৰন্দরপ্রভৃতিরপি অতিদুর্ভানি রাজাহুখান্ত্বশ্চবন।

(b) দৃষ্ট্বা চ পিতরং দুরাদেবাবতীৰ্য্য বাজিনশ্চ ডামণিমরীচিমালিনা মোলিনা মহীমগচ্ছত।
অথ প্রসারিতভুজেন “এহোহীত্যাঙ্কয় পিত্রা হচিরং গাঢ়মুপগচ্চ, তৎকালসন্নিহিতানাং চ
মানীনানাং কৃতনমস্কারঃ, করে গৃহীত্বা বিলাসবতীশ্ববনমনীয়ত। তদ্যাপিতথৈন সর্দান্তঃ
পুরপরিচারয়া প্রত্যাগম্য অভিনন্দিতাগমনঃ কৃতাগমনমঙ্গলাচারী দিগ্বিজয়সম্বন্ধাভিরেব কথাভিঃ
ককিংকালং স্থিত্বা শুকনাসং ত্রষ্টু মাযযৌ। তত্রাপ্যমূনৈব ক্রমেণ হচিরং স্থিত্বা, নিবেগ
বৈশম্পায়নং স্বক্কাবারবন্তিনং কুশলিনম্, আলোক্য চ মনোরমান্, আগত্য বিলাসবতীশ্ববন
এব সর্বাঃ স্তানাদিকাঃ পরবশ ইব ক্রিয়া নিবর্তয়ৎ।

(c) কুমার! বিলাসবতী সমাজাপরতি। ইয়ং খলু কল্পকা মহারাজেন পূৰ্ব্বং
কুল্তরাজধানীমবজিত্য কুলুতেবরহুহিতা পত্রলেখাভিধানা বালিকাসতী বন্দীজনেন সহানীয়া
অন্তঃপুরপরিচারিকামধ্যমুপনীতা। সা ময়া বিগতনাশা রাজহুহিতেতি সমুপজাতস্নেহয়া
দুহিতৃনির্কীর্ষেবমিয়ন্তঃ কালমূলপালিতা সংবর্দ্ধিতা চ। তদীয়মদানীমুচিতা ভবতস্তাশূলকরহ-

বাহিনীতিকৃৎ। ময়া প্রেথিত। ন চাত্মায়ুত্বজা পরিজনসামাজদৃষ্টিনা ভবিতব্যম্। বালেন
লালনীয়া। স্বচিন্তবৃত্তিরিব চাপনেভ্যো নির্বারণীয়া। শিক্তো ব্রষ্টব্য। স্বহৃদিব
সর্ববিশেষভেদভাস্তরীকরণীয়া। দীর্ঘকালসংবর্জিত স্নেহতয়া স্বভৃত্যামিব জদয়মন্তামতি মে।
বলবানভাংগকৃপাতঃ। মহাভিজন রাজবংশপ্রমুতা চার্হতীয়মেবং বিধানি কর্মণি।

2. (a) Disjoin the *sandhis* in the underlined parts in any two of the following sentences :

(i) রামশ্চিনোতি যশস্বতিং পুষ্পাণি।

(ii) অগ্নিশ্চিন্নয়তাগ্নিম্।

(iii) উথানং সম্পদো হেতুঃ।

(b) Decline any six of the following :—গো in the accusative plural ; তৈ in the genitive plural ; নৃ in the genitive singular ; প্রবী in the accusative singular ; ত্রি (masculine) in the genitive plural ; পতি in the genitive singular ; গ্রামণী in the accusative singular ; ক্রোষ্ট in the nominative dual.

(c) Conjugate any three of the following :—জি in লিট third person, singular and plural ; বজ্ in লিট third person, singular and dual ; গম্ in লুঙ third person, singular and plural ; দৃশ্ in লৃঙ third person, singular and plural ; বস্ in লিট singular and dual.

(d) Derive any four of the following :—শুকং অবগত ; লভ্য ; প্রিয়ংবদ ; আশ্রয় ; কীরাতীর্জুনীয় ; দস্তা।

(e) Substitute one word for any four of the following :—

কুণ্ডা অপত্যং পুমান্ ; যো ব্যাকরণমধীতে ; গ্রহীতুমিচ্ছতি ; পুনঃ পুনঃ পততি ;
আশ্বনঃ পুত্রমিচ্ছতি ; কলহং করোতি।

(f) Comment grammatically on any four of the following underlined words:—সমাবন্তে ধনং রাজা ; বেগং নিতামাতিষ্ঠতে ; নিবেষতে ধর্ম সাধুঃ ; স্বপুণ্ড্রং ন প্রবোধয়ে ; আহিনকুলং পরম্পরং যুধ্যতে।

(g) Expound the *samasas* in any four of the following :—অমুগিরম্ ; পঞ্চরাজম্ ; পুরুষব্যাস্রঃ ; বিক্রাঃ ; ব্রহ্মবর্জসম্।

(k) Distinguish the meaning of any two of the following pairs of words from each other :—आचार्यानि and आचार्या ; कवियानि ; and कविश्र ;
 উপাধ্যায়ানি and উপাধ্যায় and হুগন্ধি and হুগন্ধ :

3. Correct the errors in any four of the following sentences :—

- (a) পাপং জুগুপসতে রামঃ ।
- (b) দেবৈ বেদানধ্যাপয়দ্ বিধিঃ ।
- (c) রথেন সঞ্চরন্ রামো দদর্শ মুনিপুংসবন্ ।
- (d) দেবদত্তং বাহয়তি ভারং রাজা ।
- (e) পিশাচসভাং প্রবিষ্টাব্যেপং সাধবঃ ।
- (f) মুর্ম্মাণং নরপতিং জীবয়িতুং যততে ভিক্ষক্ ।

Group II

1. Either, The age and history of the *Mahabharata*.

Or, Write a short discourse on Lyric Poetry in Sanskrit literature.

2. Write a note on the Purposes and their position in Indian literature.

3. Write notes on any five of the following :—Rajatarangini, Bhartihari, Amaru, Haranjaya, Srikanthacarita, Kathasaritsagara, Abhinavagupta, Gunadhya, Bharavi.

Calcutta University
BENGALI COMPOSITION
1909

1. Translate any one of the following passages into Bengali :—

(a) Bharat said to Ramchandra :—O thou the dread of thy foes ! what earthly mortal can be compared to thee ? Thou art one who can neither be cast down by adversity nor puffed up by prosperity. Respected as thou art even by the aged, thou never refused to seek their advice when doubts and difficulties arose. How can a person of such consummate wisdom be overcome by any mischance ? No one who understands his advantages and disadvantages like thyself can sink under affliction. And as to thy magnanimity, thy fidelity, thy knowledge, thy experience, thy wisdom they evince a good like heavenly mind.

(b) My whole employment is to persuade the young and old against too much love for the body ; for riches and all other precious things, of whatever nature they be and against too little regard for the soul which ought to be the object of their affection : for I incessantly urge you, that virtue does not proceed from riches but on the contrary riches from virtue ; and that all other goods of human life public as well as private have their source in the same principle. If to speak in this manner be to corrupt youth I confess, Athenians, that I am guilty and deserve to be punished.

2. Re-write the following in plain modern Bengali prose :—

এথেন্স নগরীর নব্য লোকেরা সক্রেটিসের শিষ্য হওনার্থে কি পর্য্যন্ত মচেষ্টিত ছিল, তাহা অবিকল বর্ণনা করিলে উৎকট বোধ হইবে। তাহারা তাহার নিকটস্থ হইয়া উপদেশ শ্রবণার্থে পিতামাতা ও কৌতুক ক্রীড়াদি সমস্ত ত্যাগ করিত। ইহার এক দৃষ্টান্ত আলসিবিয়াডিস্। স্বজাতীয় লোকের মধ্যে একজন অতি প্রচণ্ড স্বভাব হইয়া অহঙ্কারাঙ্গদ হইয়াছিল, তথাপি সক্রেটিস্ কখন তাহার অনুরোধ করিয়া উগ্র চিন্তের বিক্রম দমন করণে সন্মুচিত হয়েন নাই। তাহার উগ্রতার উদাহরণ পূর্ব্বেই উক্ত হইয়াছে। উহার বংশীয় যুবকেরা ধনগোরবে যে প্রকার ক্ষীত হইয়া থাকে আলসিবিয়াডিস্ এক দিবস সেইরূপে আপন সম্পত্তির দর্প করিতেছিল সক্রেটিস্ তাহা দেখিয়া এক ভূগোলীয় মেপ অর্থাৎ নক্সাতে আটকা দেশ চিহ্নিত করিতে অনুরোধ করিলেন, কিন্তু অতি ক্ষুদ্রতা হেতুক ঐ দেশ প্রথমতঃ তাহার দৃষ্টিগোচর হয় নাই, পরে বহু ক্রেশে দেখিতে কহিলেন “এ দেশ অতি ক্ষুদ্র, নক্সাতে সহজে দৃষ্টিগোচর হয় না।” সক্রেটিস্ উত্তর করিলেন, “তবে দেখ তুমি কেমন ক্ষুদ্র স্থানের জন্ত অভিমান করিতেছ।”

3. Re-write the following correcting any error in grammar, spelling, idiom and figures of speech you notice in it :—

তিনি যেক্ষণ জয়গ্রাহিনি বাক্যে বক্তৃতা করিলেন তাহাতে আমার মানসক্ষেত্রে তাঁহার উপদেশ সমূহ অঙ্কিত হইয়া গেল; তিনি বলিলেন বীর ও করি প্রসবিনী এই ভারতবর্ষ সর্বদাই জগতের সম্মান লাভ করিয়াছে। বিধাতা এই দেশের প্রকৃতিকে যেক্ষণ বিবিধ সৌন্দর্য্যে সম্পূর্ণ করিয়া রাখিয়াছেন, এ দেশবাসী আৰ্য্যগণের হৃদাকাশও তদ্রূপ বিভিন্ন সদৃশ ক্রমে অনুরঞ্জিত করিয়া রাখিয়াছেন। এ দেশের লোক স্বভাবতঃ ধর্ম্মভিরা, চিন্তাসরল এবং রাজভক্ত, তাহারা জীবনে ক্ষণস্থায়ী বিষয়ে অভিজ্ঞ এবং ঈশ্বরে নির্ভরশীল, তাহারা যেক্ষণ কষ্ট-সহিষ্ণু, তেমনই নিশ্চয়পূর্ণ, যেমন ধৈর্যবান তেমনই সংযতশীল।

4. Write an essay in Bengali on any one of the following subjects :—

- (a) The character of Seeta as described in the Ramayana.
- (b) Pundit Iswar Chandra Vidyasagara, with special reference to his strength of character, self-reliance, and philanthropy.
- (c) The character of Ayesha.

1910

1. Translate any one of the following passages into Bengali :—

(a) Character is the dearest earthly possession, in as much as it is that alone, which can secure and render permanent everything. To be without character is to be without honour or friendship in our intercourse with mankind, and without principle or self approbation in the retirement of our bosoms. The evil feelings which lead a man to disregard his own reputation and the estimation of society at large, are precisely those which render callous every amiable disposition of his heart, and deafen him to the voice of both outward and inward applause. Yet there cannot fail to be moments in the history of such a man when lost and disregarded as he is, the voice of former days reaches his ears in a tone of unutterable reproach, and reminds him of comfort destroyed, of character lost, of respectability forfeited, of the rise and increase of habits, both of thought and action, which have led him step by step to a distance from honour and happiness which he could not once have contemplated without a shudder.

(b) What an unlucky fellow I am! worn to a shadow by my royal friend's sporting propensities. 'Here's a deer!' 'There goes a bear!' 'Yonder is a tiger.' This is the only burden of our talk, while in the heart of the meridian sun we toil on from jungle to

jungle wandering about in the paths of the wood, where the trees afford us no shelter. Are we thirsty? we have nothing to drink but the foul water of some mountain-stream, filled with dry leaves which give it a most pungent flavour. Are we hungry? we have nothing to eat but roast game, which we must swallow down at odd times, as best we can. Even at night there is no peace to be had, sleeping is out of the question with joints all strained by dancing attendance on my sporting friend, or if I do happen to doze I am awakened at the very earliest dawn by the horrible din of a lot of rascally beaters and huntsmen, who must needs surround the wood before sunrise and deafen me with their clatter.

2. Re write the following in modern Bengali prose, carefully avoiding all archaic expressions :—

পরে নবাব শ্রাজেরদৌল্লা পলায়ন করিয়া বান। তিন দিবস অভুক্ত। অত্যন্ত ক্ষুধিত। নদীর তটের নিকট এক ফকিরের আশ্রয় দেখিয়া নবাব কর্ণধারকে কহিলেন এই ফকিরের স্থান, তুমি ফকিরকে বল কিঞ্চিৎ খাদ্য সামগ্রী দেও একজন মনুষ্য বড় পীড়িত কিঞ্চিৎ আহার করিবেক। ফকির এই বাক্য শ্রবণ করিয়া নৌকার নিকট আসিয়া দেখিল সত্য নবাব শ্রাজেরদৌল্লা বিষন্ন-বদন। ফকির সকল বস্তান্ত জ্ঞাত হইয়াছে। বিবেচনা করিল নবাব পলায়ন করিয়া যায় ইহাকে আমি ধরিয়া দিব আমার পূর্বে যাপেট নিগ্রহ করিয়াছিল তাহার শোধ লইব ইহাই মনমধ্যে করিয়া করপুটে বলিল আহারের দ্রব্য আমি প্রস্তুত করি, আপনারা সকলে ভোজন করিয়া গ্রহান করুন।

3. Re-write the following correcting any errors you notice in them.

(a) জ্ঞানানুশীলনের উপর চরিত্রের পবিত্রতার নৈকট্য সম্বন্ধ দৃষ্টি হয় না।

(b) যে দিন পৃথীরাজ যুদ্ধে পরাজয় হইয়াছিলেন সেই দিন হইতে ভারতবাসীর স্বাধীনতার রাহগ্রস্ত হইতেছে।

(c) পূর্কোক্ত ঘটনা বিস্তারিত করিলে শুনিবামাত্র বাণকের মুখ শুক ও সমস্ত হইয়া উঠিল।

(d) তিনি আমার প্রভাবে শীতল জল নিক্ষেপ করিলেও আমি তাঁহাকে আমার উত্তম ধর্ম্মবাদ জ্ঞাপন করিলাম।

4. Write an essay on one of the following subjects :—

(a) The influence of Vidyasagar on Bengali prose.

(b) Ramchandra, as a son, a brother, as a husband, and as a sovereign.

- (c) The character of Osman contrasted with that of Jagatsingha.
- (e) Female education.
- (d) Pursuit of knowledge under difficulties.
- 5. Write a letter giving suitable advice to a younger brother reported to have fallen into evil ways while living in a foreign country.

1911

1. Translate any two of the following passages into Bengali :—

(a) How different were the feelings of those who looked upon him in that moment ! The soldiers saw in him, it is said, a mighty general ! Women saw a beautiful youth. The people saw simply a great man. Nanda and his subjects saw the beloved cowhead of Brindaban. Daivaki and Vasudev, from their place near the King's person, saw their babe of one stormy night twelve years before. Saints saw the Lord Himself appear on earth in human form. And Kansa on his High seat trembled ; for in the beautiful lad before him, without armour, weapons, or followers,—he, seated on his throne surrounded by his armies, saw only his destined destroyer.

(b) His lameness, to say the truth, was of no ordinary kind ; he could with difficulty go, with the help of his crutch, from one room of his house to another. His pupils often lent him a helping hand in going from room to room, and sometimes I am sorry to say, assisted him to a fall, as a sort of retaliation for the caning they so frequently received from him. He was about forty years old, had dark skin, and a rather high forehead for a Bengali. He stooped a good deal. In addition to his lameness, he had another bodily defect, which considerably marred his influence and made him often an object of derision,—he spoke through his nose. His nasal twang was so strong, that if he were speaking at night in a dark room, he might be mistaken by children for ghost—for Bengali ghost speak strongly through the nose.

(c) Akbar was not only the ornament of the Moghul dynasty but incomparably the greatest of all the Mahomedan rulers of India. Few princes ever exhibited greater military genius or personal courage. He never fought a battle which he did not win, or besieged a town which he did not take ; yet he had no passion for war, and as soon as he had turned the tide of victory by his skill and energy, he was happy to leave his generals to complete the work and hasten back to the more agreeable labours of the council chamber. The glories of his reign rest not so much on the extent of his conquests, though achieved by his personal talent, as on the admirable institutions by which his empire were consolidated.

2. Rewrite the following passages in chaste and idiomatic Bengali, avoiding all Anglicism and inaccuracies that you may notice :—

আমি বিমুঢ় হইয়া পড়ি ভাবিতে সেই রাজার চরিত্র যিনি একাধারে সমস্ত সদগুণাবলীর মালিক ছিলেন, যাহাকে হুৰ্ভাগ্য দমাইতে পারে নাই এবং সৌভাগ্য উজ্জ্বল করে নাই, এবং অবস্থা টলাইতে পারে নাই বাহার ধৈর্য ; পরাজয় হইয়াও যিনি কদাপিও আশা ছাড়িতেন না, এবং জয়ী হইয়াও যিনি উদার,—যিনি যত্ন করিয়াছিলেন অক্লান্তভাবে শিক্ষা দিতে স্বীয় প্রজা-দিগকে। আমরা স্মরণ করি তাহাকে যেহেতু তিনি ইংরেজী আইনের কতকগুলি উৎকৃষ্ট ধারা প্রস্তুত করিয়া গিয়াছেন ; কিন্তু কেন না আমরা তাহাকে স্মরণ করিয়া চেষ্টা করব শিক্ষা দিতে সেই সকল স্বদেশীয় ব্যক্তিদিগকে বাহারা অজ্ঞান ভিমিরে একরূপ বধির হইয়া আছে।

3. Form sentences to illustrate the appropriate use of any *four* of the following words :—

নিরাকরণ, বিব্রত, বাপদেশ, নিরসন, নিয়মিত, প্রত্যাহার, নবীভূত, পর্যায়ক্রমে, বিশেষজ্ঞ and জ্ঞেয়।

4. Substitute suitable Bengali equivalents for non-sanskritic word in the following :—

আমি তাহার অবস্থা সৰ্ব্বত্র সমস্তই অবগত ছিলাম, এবং তাহার গুণের কদর জানিতাম, সুতরাং তাহার এই বদ্বাল দেগিয়া কিছু টাকা কর্জ স্বরূপ দিলাম। সে উহা পাইয়া আমাকে বলিল যে বিপদের সময় আমার এই মেহেরবানির কথা তাহার চিরদিন মনে থাকিবে, কিন্তু তাহার মূনিব তাহার উপর যেৰূপ জনরদন্তি করিতেছেন এবং ক্রমাগত খাজানা বাড়াইতেছেন তাহাতে তাহার এলাকায় সে আর কিছুতে থাকিতে পারিবে না।

5. Write an essay on any *one* of following subjects :—

(a) The characters of Jagat Sinha and Osman in Bankim Babu's Durgas-nandini.

(b) The story of Sakuntala.

(c) Perseverance leads to success.

(d) Pandit Iswar Chandra Vidyasagar—as a man of letters—as a social reformer—as dutiful and affectionate son—as a friend of the needy and the destitute.

1912

1. Translate any *one* of the following passages into Bengali :—

(a) It is now fifty years since Queen Victoria, my beloved mother, and my august predecessor on the throne of these realms,

for divers weighty reasons with the advice and consent of Parliament, took upon herself the Government of the territories theretofor administered by the East India Company. I deem this a fitting anniversary on which to greet the princess and peoples of India in commemoration of the exalted task then solemnly undertaken. Difficulties such as attend all human rule in every age and place have risen up from day to day. They have been faced by the servants of the British Crown with toil and courage and patience with deep devotion and counsel, and a resolution that has never faltered or shaken.

(b) At last the owner of the palace appeared there. From the respect of those around him, and the awe with which all present withdrew to a distance, Jussuf concluded that he must be the Sultan or the Prince of the country. He looked at the poor captive and spoke to his servants in a language which Jussuf did not understand. They immediately brought a large cage of strong bamboo poles. Jussuf was unbound, pushed in, and locked up. They then brought out a large elephant, put the cage on it, and so led him through the streets of the town, whilst the crier called out some taunting thing in every street and pointed at him with his stick. The boys threw stones at him and if he showed himself in pain from any of the stones hitting him, and crouched up, or if he evaded any of the stones by the bars of his prison, every one burst out into an immoderate fit of laughter.

(c) It appears that when Man Sinha became the ruler of Bengal Mahamad Sharif, an oppressive man, was invested with power and influence, and as a consequence the people were grievously oppressed. Bramins and Vaishnava, traders and agriculturists, were subjected to equal tyranny, fallow lands were entered as arable. Fifteen *cattas* of land were reckoned as a *bigha* by a vicious system of measurement. Every rupee was short by $2\frac{1}{2}$ annas. The agriculturists began to sell off their cattle and grain of which there was a glut in the market; so that thing of the value of a rupee sold for 10 annas. Gopinath Nandy, the Talukdar, under whom the poet held his lands, got into a seture and was imprisoned.

2. Briefly give the story of Durgeshnandini in your own words, bringing out specially the character of Jagat Sinha.

3. Rewrite the following correcting all errors :—

আমি তাহার কথায় পরম পরিতোষ হইয়া বলিলাম যে সকল মানুষ সমুহ পিতৃ মাতৃর দেবাসক্ত না হয় তাহাদের এবং ইতর জন্মের সহিত কোন পার্থক্যতা নাই। তোমার সহিত আমার নৈকট্য সৰ্ব্বত্র তাহাতে তোমার সৌজন্যতা এবং গুরুজন প্রতি ভক্তি দেখিয়া আমার মনে প্রকৃতিই দর্প হইতেছে। যাহারা অল্প বয়সে গুরুবাক্তির প্রশংসিত পথ ধারণ না করিয়া

খায় ইচ্ছা কুপে প্রধাবিত হয়, তাহার। নদীর ভঙ্গুর কূল ভূমির জায় স্বায় বাসনার দুর্দমনীয় শৈল
শেখরে, নিমজ্জিত না হইয়া যায় না।

4. Render the following into simple and chaste modern forms :—

(a) এক রাজকীয় লোক থাকে তাহার নাম জামল।

(b) পক্ষী কহিল, হে বঙ্গলোকেবা অতএব আমি কহি—সহসা কোন কর্ম্ম করা ভাল
নাহে।

(c) যার যে জাতীয় ধর্ম, সে পুতঃ প্রকাশ হয়, ইহার কথা। এক সিংহ গর্ভিনী বনমধ্যে
প্রসব হইয়া জাত মাত্র শাবক ত্যাগ করিয়া অল্প কাননে গিয়া থাকিল।

(d) রাজাদের রাজকাৰ্য্যসাধন-সামগ্রি-সমগ্র মধ্যে বিশ্বজ্ঞানের। শ্রেষ্ঠতম হন, ইত্যাদি
নীতিগর্ভ কথা।

5. Rewrite the following in simple prose, avoiding compound words as far as practicable :—

দক্ষিণ দেশে উজ্জয়িনী নামে নগরীতে দাক্ষিণাত্য রাজ শিরোরত্ন উজ্জয়িনী বিজয় নামে
এক সার্বভৌম মহারাজ ছিলেন। রাজপুত্র বীরকেশরীনাма এক দিবস অরণ্যান্তরালে ভ্রমণ
করিয়া ইতস্ততো বনভ্রমণ জনিত পরিশ্রমেতে নিতান্ত শ্রান্ত হইয়া বটবিটপিচ্ছায় নিদ্রাবসান
করিতে বটজটাতে ঘোটক বন্ধন করিয়া নিজ ভৃত্যজন সমাগম প্রতীক্ষাতে উপবিষ্ট
হইলেন। তদন্তর রাজদ্বারস্থিত ঘটীযন্ত্রস্থ দণ্ডতলী দিবাকর জলনিমগ্ন জায় অন্তর্মিত হইলেন
এবং প্রবলতর বায়ু সহিত ঘন ঘন ঘোর ঘটীতে দিগ্বিদ্যুৎসমূহ নিবিড়চ্ছন্ন হইল এবং অন্ধতম-
সাবৃত বনস্থলীতে বিদ্যুৎপ্রতি মাত্র প্রদর্শিত পদ্ধতি নৃপকুমার বন্ধনোন্মুক্ত অথপালক ও স্বকীয়
সেবক সকলের অনাগমন নিমিত্ত চিন্তাকুলান্তঃকরণ হইয়া ইতস্ততো ভ্রমণ করিতে লাগিলেন।

6. Write an essay on any one of the following subjects—

(a) The character of Dushmanta.

(b) Our country-sports and festivities.

(c) Raja Ram Mohon Roy—as a social reformer, as a spiritual leader, and as a man of letters.

1913

1. Translate any two of the following passages into Bengali :—

(a) Dacca has long been celebrated for its *muslins*. These fabrics were in Europe in the first century of the Christian era, and

were highly prized by the ladies of Imperial Rome in the days of its luxury and refinement. Pliny, in enumerating the imports from Egypt and Arabia, mentions the Bengal *muslins*; and the author of the *Circumnavigation of the Erythraean Sea* bears testimony to their extreme fineness and transparency. In this work, which is supposed to have been written by Arrian, an Egyptian Greek mention is made of several kinds of Indian *muslins*, which are distinguished by commercial names derived from the country. The word *Carpassas*, which is employed to designate the fine Bengal *muslins* is obviously derived from the Sanskrit *Karpasa* or Bengali *Kapas* cotton. The word as used by the Aryan and the Egyptian traders generally took its origin in all probability, from *Capassia*, the country from which those *muslins* were exported.

(b) The Mahabharata in referring to the spiritual power to be acquired by Yoga, says :—He, O King, who devoted to the practice of austerities, betaketh himself to Brahmacharya in its entirety, and thereby purifieth his body is truly wise, for by this he becometh as a child free from all evil passions, and triumpheth at last. But it adds also that it was through the practice of Yoga that the heavenly musicians, dancers, the *gandharvas* and *apsaras*, acquired the marvellous physical beauty they possessed. And so in both Hindu and Buddhist artistic canons it is laid down that the form of gods who also, like human beings, acquired divine powers by ascetic practices were nevertheless not to be represented like the human ascetics with bodies, emaciated by hunger and thirst, but with smooth skin, rounded limbs, the neck and shoulders massive and strong, and the waist narrow like body of a lion.

(c) Asoka attached the greatest importance to utmost possible promptitude in the administration of justice, and to the readiness of the sovereign to hear complaints, at all times and in all places. His views would still meet with general approval from the natives of India, who prize very highly readiness of access to their rulers and set no value upon regularity of procedure. Asoka announced to his people that he was ready at any place at any time of the day or night to receive and redress complaints. No more popular announcement could be made by an Indian sovereign, although to the western mind it seems impracticable.

2. Contrast the character of Ayesha with that of Tilottama.

Or,

Point out the peculiar excellences of the drama of *Sakuntala* as shown in your *Prachin Sahitya*.

Or,

Illustrate the noble qualities that Vidyasagar possessed by some anecdotes from his life.

3. Re write one of the following passages in simple and chaste Bengali—

(a) ভূচিহ্ন নামে এক পক্ষী আছে। সে বিদারিত হস্তিকুন্ত হুল মাংসাশী সিংহ যখন স্ববদন ব্যাদান করে, তৎক্ষণে ক্ষিপ্ত বাণবৎ অত্যন্ত বেগে উড্ডীন হইয়া তদন্তঃসংলগ্ন মাংসখণ্ড স্বচক্ষুপুটে গ্রহণ করিয়া আপনি ভোজন করে কিন্তু “কেহ সাহস করিও না।” এই শব্দ মুহূর্মূহ করে। অতএব কহি এই ভূচিহ্ন শকুনি যেমন স্বয়ং অতিশয় সাহসিক কর্মচারী হইয়া অস্ত্রকে সাহস করিতে বারণ করে, তেমনি এতৎকালীন লোকেরা প্রায় সকলেই স্বার্থান্ধিক স্বার্থান্ধ ক্যাপনার্থ ধর্মকথা অস্ত্রকে শুনায়ে আপনার। পুনর্ন্থেচ্ছচারী হয়।

(b) একদিবস মণিখচিত ফটিকময় সভাগৃহেতে কালিদাস, ধর্মন্তরি, ক্ষপণক প্রভৃতি নবসংখক পণ্ডিত রত্নরাজবিরাজিত অস্ত্রান্ত সভাসমূহ শোভিত নৈয়ায়িক বাণোপাসিত মহার্ষ মণিময় সিংহাসনোপবিষ্ট বহুবিদ রত্নরাজভূষাভূষিত শ্রীমান্ মহারাজাধিরাজ বীর বিক্রমাদিত্য সাক্ষাৎকার বিবটবদন। কৃষ্ণবর্ণ রাত্রিকরী এক রাক্ষসী উপস্থিত হইল।

4. Re write the following correcting all errors :—

যিনি স্বীয় সূচ্যগ্র বুদ্ধি দ্বারা জ্ঞানের সমস্ত জটিল তত্ত্ব খণ্ডবিখণ্ড করিয়া স্বীয় প্রতিভাপ্রভায় সমস্ত ভারতবর্ষ আমেদিত করিয়াছিলেন, সেই অপূর্ব্ব বিশক্তি সম্পন্ন আচাৰ্য্য রঘুনাথ শিরোমণিকে আমরা নমস্কার করি। তাঁহাকে নব্যন্যায়ের জন্মদাতা বলিলেও অত্যাুক্তি হয় না। বাহুদেব যে বীজ বপন করিয়াছিলেন, রঘুনন্দন তাহার প্রবাহ অশেষ রূপে বৃদ্ধি করেন। সে সময় পক্ষধর মিত্রের নিকট বিদায় হইয়া তদীয় শিষ্য বাহুদেব সাক্ষরভৌম নবদ্বীপে আসিলেন তাহার পর হইতেই মিশিলার পণ্ডিত নবদ্বীপের নিকট পরাজয় হইলেন এবং ভারতবর্ষের অপরাপর স্থানের শিক্ষিত সমাজ বঙ্গীয় পণ্ডিতগণের নিকট পরাভব স্বীকার হইয়া শিথিল গ্রহণ করিলেন।

5. Write a letter to one of your friends on the need of technical and scientific education in India at the present time,

Or,

Write an essay on any one of the following subjects :—

- Influence of home on the formation of character.
- Charity.
- The career and character of Ram.
- Emperor Akbar.

1. Translate any two of the following :—

(a) Many affecting anecdotes of Mahamud Gawan are told by local historians, but none is more characteristic of the man than the following :—when he returned from his campaign in the Konkon, honour and gifts were showered upon him, and when his king paid a memorable visit, and put his own robes upon his minister, Mahamud, when the king had lift him, went to his chamber, and casting himself on the ground wept bitterly ; after which he sent for the holy men of Beeder, and distributed what he possessed among them. When asked why he had done this he said gravely, ‘when the king honoured me with a visit and the queen-mother called me brother, my evil passions began to prevail against my reason, and the struggle between vice and virtue became so great that I became distressed even in the presence of his majesty. I have therefore parted with my wealth—the temptation to evil.

(b) Ujjayini during King Vikramaditya’s reign, was the most brilliant capital in the world, nor has it to this day lost all the lusture shed upon it by that splendid court. Among the eminent men gathered there, nine were particularly distinguished, and these nine are known ‘as the nine gems.’ Some of the nine gems were poets, others represented science, astronomy, medicine, lexicography. It is quite true that the details of this late tradition concerning the nine gems are open to suspicion, yet the central fact is not doubtful : that there was at this time and place a great quickening of the human mind, works that cannot perish.

(c) Kalidas’s knowledge of nature is not only sympathetic, it is also minutely accurate. Not only are the snows and windy music of the Himalayas, the mighty current of sacred Ganges, his possession his too are smaller streams and trees, every little flower. It is delightful to imagine a meeting between Kalidasa and Darwin. They would have understood each other perfectly; for in each the same kind of imagination worked with the same wealth of observed fact, the prevailing note of Kalidasa’s writing is his love of external nature. No doubt it is easier for the Hindu, with his almost instinctive belief in reincarnation, to feel that all life from plant to God, is truly one.

2. Rewrite the following correcting all errors .—

(a) যে সকল জামাজিনী বালিকাগণ সেখানে উপস্থিত ছিল তাহাদের কেহ কেহ আমাকে সবিনয় সহকারে প্রণামপূর্বক সশক্তভাবে বলিব আগতকল্য আমরা বিজ্ঞালয়ে উপস্থিত হইতে পারিব না।

(b) যতপি তুমি যাও তবেই আমি যাইতে পারি । নিন্মকেরা বাহাই বলুক না কেন, আমি কখনই তোমার সেবার ক্রটি করি নাই, তোমার কাতর সংবাদ পাইয়াই আমি চলিয়া আসিয়াছি আমি তোমাকে সাক্ষ্য মান্ত করিতেছি অপরের। আমার বিপক্ষে সাক্ষ্য দিয়া কি করিতে পারে ? তুমি নিরোগী হও, তুমি আমার প্রতি সদয়যুক্ত থাকিলে আমার অপরের প্রশংসার আবশ্যক কি ?

3. Turn the following into correct and elegant modern Bengali :—

প্রথমত এই বাহাকে ব্রহ্ম জগৎকর্তা কহ, তিনি বাক্য মনের অগোচর, স্তুতরাং তাহার উপাসনা অসম্ভব হয় এই নিমিত্ত কোন রূপগুণবিশিষ্টকে জগতের কর্তা জানিয়া উপাসনা না করিলে নির্বাহ হইতে পারে নাই অতএব রূপগুণবিশিষ্টের উপাসনা আবশ্যক হয় । উক্তর এই যে কোন ব্যক্তি বাল্যকালে শত্রুগ্রন্থ এবং দেশান্তর হইয়া আপনার পিতার নিরূপণ কিছুই জানে নাই এ নিমিত্ত সে ব্যক্তি যুবা হইলে যে কোন বস্ত্র সন্মুখে পাইবে তাহাকে পিতারূপে গ্রহণ করিবে এমত নহে বরঞ্চ সেই ব্যক্তি পিতার উদ্দেশে কোন ক্রিয়া করিবার সময়ে অথবা পিতার মঙ্গল করিবার কালে এই কহে যে জন জন্মদাতা তাহার শ্রেয় হউক ।

4. (a) Describe Kapalkundala, both as a maiden in the Kapalik's ashram, and as a wife in the house of Navakumar.

Or,

(b) Estimate the place of Vidyasagara in Bengali literature.

5. (a) Illustrate by referring to the incidents described in the Uttara Charita the remark that Bhavabhuti excelled in pathos.

Or,

(b) Give glimpses of the Mogul court life as described in the Kapalkundala.

6. Write an essay on any one of the following :—

(a) 'Home, sweet home, there is no place like home.'

(b) The lessons of adversity.

(c) Describe an exhibition (মেলা) that you may have witnessed in a village or a town—the impetus it gives to commerce, its sports and amusements, and its effects on the economic condition of the country.

1. Translate [a], and either [b] or [c] :—

(a) Attempts have also been made to establish a definite and immediate connexion between the Hindu narrative and at least the earlier portion of St. Mathew's Gospel. But I think without success. There is an obvious similarity of sound between the names of Christ and Krishna. Herod's massacre of the innocents may be compared with the massacre of children of Mathura by Kansa ; the flight into Egypt with the flight to Gokul. As Christ had a forerunner of supernatural birth in St. John the Baptist, so had Krishna in Balaram ; and as the infant Saviour was cradled in a manger and first worshipped by shepherds though descended from the Royal house of Judah ; so Krishna though a near kinsman of the reigning prince, was brought up amongst cattle and manifested his divinity to herdsmen.

(b) On his accession to the throne, Mujahid Shah was nineteen years of age ; tall and majestic in person and possessed of great bodily strength. He did not long preserve the peace with Beejanagar which his father had so well observed and his first demand was to an imperious message to Krishna Rai, the reigning Raja, to give up the territory west of the Tungabhadra as also the district, between the Tungabhadra and the Krishna rivers. In reply the Raja not only refused the demand, but haughtily claimed that the elephants taken by the late King Mahomed should be returned.

(c) For many years past one of the most curious sights of the place has been an aged Hindu ascetic who had bound himself by a vow of absolute silence. Whatever the hour of the day, or time of the year, or however long the interval that might have elapsed since a previous visit, a stranger was sure to find him sitting exactly on the same spot, as if he had never once stirred. The half-century which was limit of his vow, has at length expired, but his tongue, bound for so many years, has now lost the power of uttering any articulate sound.

2. Re write the following in simple and elegant modern Bengali :—

ধর্ম্মার্থে এক ব্রাহ্মণ থাকেন ; তিনি হবিষ্যলী-মংশ মাংসাদি আমিষ কদাচ ভক্ষণ করেন না। ঐ ব্রাহ্মণ এক দিবস বিবেচনা করিলেন আমিষ মীন সংহত যে সলিল সে পেয় হতে পারে না অতএব আজি অবধি আমি নদী নদহ্রদ পুকুরিণী পল্লব প্রভৃতি জলাশয়ের জল পান করিব না। তাহা করিলে নিরামিষ ভোজ্য ব্রত ভঙ্গ প্রসঙ্গ হইবে তবে এতৎ পর্য্যন্ত যে তাহা অজ্ঞানতঃ। এইরূপ মনে করিয়া তদবধি নতাদি পয়ঃ পান পরিত্যাগ করিলেন অতঃপর

সলিলবাহিনী নদীর ধারি পান করিতে লাগিলেন। দৈবাৎ সে জলেতেও এক দিবস এক ক্ষুদ্র সফর যন্ত্রকে বীক্ষণ করিয়া তজ্জল পান বর্জন করিয়া কুপোদক পান করিতে লাগিলেন। কদাচিৎ একদা তদযুতেও এক ক্ষুদ্র প্রোষ্টি দেখিতে পাইয়া সে জল খাওয়া ছাড়িয়া নারিকেলোদক পাইতে আরম্ভ করিলেন। অনন্তর সে জলের ভিতরেও ফ্রি কীট বীক্ষণ করতঃ তৎপান পরিত্যাগ করিয়া বর্ষোদক প্রত্যাশাতে উচ্চ মুখ ব্যানন করিয়া রহিলেন।

3. Re-write the following correcting all errors :—

জলৈক দরিদ্র ব্যক্তি শিরোপীড়ায় কষ্ট পাইয়া তাঁহার স্বগ্রামবাসী এক ভূম্যাধিকারীর সঙ্গে চিকিৎসার জন্ত কলিকাতায় আগমন করেন। জমিদার মহাশয়ের সদয় ব্যবহারে সেই দরিদ্র ব্যক্তি বিশেষ ঐতিলাভ করেন এবং সেই মহত্যাগ লাভ করিয়া তদীয় বায়ে এলিওপ্যাথিক রীতাহুসারে চিকিৎসক হন। একমাস কাল মধ্যে সম্পূর্ণ রূপে আরোগ্য হইয়া তিনি স্বগ্রামে ফিরিয়া আসেন।

4. Form *one* sentence using in it the following words :—

শরণাগত, সশস্ত্র, অস্ত্রহীন, নিষিদ্ধ।

5. Give a brief summary of the contents of either the *Viracharita* or the *Malati Madhava*.

Or,

Contrast the character of *Meherunnisa* with that of *Latfunnisa*.

6. Narrate two incidents in the life of *Vidyasagar* which illustrate his benevolence.

7. Give an account of your college life—the intellectual and moral benefits you have derived from it.

Or,

Write an essay on any *one* of the following subjects :—

(a) Contentment is the true source of happiness.

(b) The man whom you love and admire the most—a short sketch of his life, and the lessons to be drawn from his career.

1916

1. Draw a short sketch of *Kapalkundala*, laying stress on those elements of her character which show its primitive innocence and purity due to an ignorance of social life.

2. Describe the gradual change that came upon the mind of *Mati Bibi* after she had met *Naba Kumar* near *Midnapur*.

3. Show the characteristic features of the poetry of Bharabi, Magh, and Sriharsha.

4. Mention and illustrate some of those noble qualities of Bhagabati Devi which Vidyasagar inherited from her.

5. Translate into Bengali any two of the following extracts—

(a) It is given but to a few to realize except from books and illustrations what the archaeological treasures of India are. As a pilgrim in the shrine of beauty I have visited them, as a priest in the temple of duty have I charged myself with their reverent custody and their studious repair. Only a few years back the wonderful remains at Gaur were smothered in a jungle, from which they literally had to be made free. If the public were fully aware of what has been done, Maldah, near to which they are situated, would be an object of constant excursion from this place.

(b) I have carried the manuscript of the translations of Rabindranath's poems about with me for days reading it in railway trains, or on the top of omnibuses, and in restaurants, and I have often had to close it lest some stranger should see how much it moved me. These lyrics, which are in the original, my Indian friends tell me, full of rhythm and of delicacies of colour, display in their thought a world I have dreamt of all my life long.

(c) Of the famous teaching of the Druids we know little owing to their habit of never allowing their doctrines to be put into writing. Caesar, however, roughly records its scope. 'As one of their leading dogmas' he says, 'they indicate this, that souls are not annihilated, but pass after death from one body to another, and they hold that by this teaching men are much encouraged to valour through disregarding the fear of death. They also discuss and impart to the young many things concerning the heavenly bodies and their movements.'

6. Re-write the following in chaste and elegant Bengali :—

যত দূর দেখা যায়, তত দূর তিনি দেখিয়াছিলেন—বরফের দেওয়াল আর কুয়াশার পর্দা, তারি ভিতর দিয়া জরা উঁকি মারছে—সাদা চুল নিয়ে; অর কাঁপছে—পাঙশে মুখে শুষ্টে চেয়ে; মরণ দেখা যাচ্ছে—বরফের মত হিম সাদা চাদরে ঢাকা। আয়নায় নিজের ছাওয়া দেখার মত সেই ঘন কুয়াশার উপরে সেই জমাট বরফের দেওয়ালে সিদ্ধার্থ নিজকে আর জগৎ সংসারে সবাইকে দেখতে পাচ্ছেন—জন্মতে, বুড়ো হতে—মরে যেতে। মহাভয় তাঁদের সবাইকে তাড়িয়ে নিয়ে চলছে রক্তমাখা ত্রিশূল হাতে। অর জরা আর মরা তিনটে শিকারী কুকুরের মত ছুটে চলেছে মহাভয়ের সঙ্গে সঙ্গে দাঁতে নখে বা কিছু সব চিরে ফেলে টুকরা টুকরা করে। তারা মায়ের কোল থেকে ছেলেকে কেড়ে নিয়ে যাচ্ছে—ঘরের মাঝ থেকে ঘরের লোককে টেনে নিয়ে যাচ্ছে—আগড় ভেঙ্গে শিকল ছিঁড়ে।

7. Re-write the following, correcting all errors :—

বিনি গুরুদত্ত উপদেশ-বীজ হৃদাকাশে বপন করেন এবং স্বীয় সংকল্প সর্বীর সিদ্ধি দ্বারা তাহা পুষ্ট করেন, তিনিই কালে সেই বীজোৎপন্ন তরুর কলোভোগে সক্ষম হন।

তিনি যতাপি বিচার মঞ্চের নিকট উপস্থিত হইয়া প্রতিশ্রুতিপূর্বক স্বীকার হইলেন যে কখনই মিথ্যা সাক্ষী দিবেন না, তথাপিও তাঁহার মুখ হইতে অজস্র মিথ্যা কথা শৈলখণ্ডের স্থায় প্রবাহিত হইতে লাগিল।

8. Write an essay in Bengali on any one of the following subjects :—

- (a) Charity begins at home.
- (b) The Indian King for whom you have the highest esteem.
- (c) The village or town you live in—Its boundaries, Geographical position. Early history. Sanitation. Economic condition. Trade, Population, Education, Distinguished men, Buildings and temples, Festivities, &c.

1917

1. Estimate Vidyasagar as a writer of Bengali prose.

Or,

2. Give an account of Vidyasagar as a friend and advocate of female education in Bengal.

3. Illustrate some of the most attractive traits in the character of Kapalkundala by reference to incidents described in the book.

Or,

Indicate what glimpses of Tantrikism are to be found in the character of Kapalikā.

4. Translate *either* of the following extracts into Bengali :—

(a) Vidyapati Thakur is one of the most renowned of the Vaishnava poets of Hindustan. Before him there had been the great Jay Deva with his *Gita Govinda* made in Sanskrit. Vidyapati's fame, though he also wrote in Sanskrit, depends upon the wreath of songs in which he describes the union of God and soul, under the names of Krishna and Radha. These were written in Maithili—his mother tongue—a dialect intermediate between Bengali and Hindi, but nearer to the former. His position as a poet and maker of language is analogous to that of Dante and Chaucer. He did not disdain the folk-speech and folk-thought for the expression of the highest matters. Little is known of Vidyapati's life. Two other great Vaishnava poets, Chandidas and Umapati were his contemporaries. His patron, Raja Shiva Sinha Rupa Narayana, when heir-

appearent, gave the village Bisali as a rent-free gift to the poet in 1400 A.D. This shows that in 1400 the poet was already a man of distinction.

(b) Kalidas probably lived in the fifth century of the Christian era. This date, approximate as it is, must be given with considerable hesitation, and is by no means certain. No truly biographical data are preserved about the author, who nevertheless enjoyed a great popularity during his life, and whom the Hindus have regarded as the greatest of Sanskrit poets. We are thus confronted with one of the remarkable problems of literary history. For our ignorance is not due to the neglect of Kalidas's writings on the part of his countrymen, but to their strange blindness in regard to the interest and importance of historic fact. No European nation can compare with India in devotion to its own literature, yet when we seek to reconstruct the life of the greatest Indian poet, we have no materials except certain legends.

5. Re write the following in chaste and elegant Bengali, retaining the words used in the text so far as you can, after corrections, and punctuating the sentence.

এ বঙ্গভূমিতে রাজা চন্দ্রকেতু প্রভৃতি অনেক অনেক রাজগণ উদ্ভব হইয়াছিলেন কিন্তু কদাচিত তাহাদের কেবলমাত্র নাম শুনা যায় তদ্ব্যতিরেক তাহাদের বিশেষ বৃত্তান্ত কি মতে বৃদ্ধি কি মতে পতন নিরাকরণ কিছুই উপস্থিত নাই। তাহাতে যে সমস্ত লোকেরা এ সকল প্রসঙ্গ শ্রবণ করে আনুপূর্বিক না জানাতে কোভিত হয়। সম্ভ্রতি সর্ব্বারম্ভে এদেশে প্রতাপাদিত্য নামে এক রাজা হইয়াছিলেন তাহার বিবরণ কিস্তি পারস্ত ভাষায় গ্রন্থিত আছে আমি তাহার স্বশ্রেণী একই জাতি ইহাতে তাহার বিবরণ আপনার পিতৃপিতামহের স্থানে শুনা আছে অতএব আমরা অধিক জ্ঞাত এবং আর আর অনেক মহারাজার উপাখ্যান আনুপূর্বিক জানিতে আকিঞ্চন করিলেন এজন্ত যেমতে আমার শ্রুত আছে তদনুযায়ী লেখা যাইতেছে।

6. Correct the errors in two of the following :—

তাহার সৌগন্ধতা দেখিয়া আমরা সন্তোষ হইলাম।

আমি তাহার মূর্ত্তি আমার হৃদয় মুকুরে লিখিয়াছি এবং তাহা প্রেমসিংহাসনে অঙ্কিত করিয়াছি অশ্রু দ্বারা অভিষিক্ত করিতেছি।

ধনধান্তশালিনী এই প্রদেশ সত্যসত্যই আমাদের জননীরাণী।

7. Write an essay on one of the following subjects :—

(a) All that glitters is not gold.

- (b) The paths of glory lead but to the grave.
 (c) The principal incidents of your life, your domestic and educational career.

1918

1. Translate any one of the following passages into Bengali :—

(a) I thank you warmly on behalf of the Queen Empress and myself for the assurance of loyalty and devotion on the part of the Corporation and citizens of the City of Calcutta to which your address gives expression. We are deeply touched by your kindly reference to my beloved father's stay in your city, and by your affectionate allusion to our own visit here six years ago. We can never forget the cordial welcome given to us on that occasion. It is a source of great pleasure for us to revisit Calcutta, and to see for ourselves evidence of your progress and prosperity.

(b) I know that you cherish ambitions that India will one day become a great manufacturing as well as agricultural country. I have watched with keen interest the progress of your business enterprises, and I trust that the success which has attended your commercial energy will attract more and more the youth of this country to regard commerce as a distinguished and honourable profession. It shall ever be our earnest endeavour to promote the welfare of our Indian Empire, and we fervently hope that the years as they pass will ever strengthen the feeling of warm attachment that exists between my house and my Indian people.

2. Give the gist of the two chapters of *Sri Kantha* headed চিত্রদর্শন and বিসর্জন।

3. Reproduce in your own words that episode from the *Kapalakundala* which has appeared most interesting to you.

4. Give a sketch of Vidyasagar as he was in his family with special reference to his conduct towards his parents.

5. Which of the two characters, Mati Babu and Kapalakundala as depicted by Bankim Chandra, do you like most? Give your reasons.

6. Rewrite the following in chaste and elegant Bengali :—

সেই মাতাপিতা বাঁহারা হচ্ছেন তোমার গুরু, পালন করিতেছিলেন বাঁরা তোমাকে কত কষ্ট স্বীকার করিয়া, নিরবধি কচ্ছেন বাঁহারা তোমার ইষ্ট সাধনা বাঁহাদের ছাড়া তোমার গতি ছিল না এক কালে তুমি হাটিতে পারিতে না তোমার তখন কোলে করিয়া বেড়াইতেন বাঁহারা, সেই মাতাপিতার প্রতি তোমার এই রূঢ় ব্যবহার কি সঙ্গত?

7. Correct all errors in the following extract :—

আমার সাবকাশ না থাকতে আমি তাহার কাতর সংবাদ শুনিয়াও দেখিয়া যাইতে পারি নাই এজন্য সে অসন্তোষ হইয়াছে ; ইহা আমার দুরাশু। তাহার চিন্তামুখে যে সন্দেহের বীজ উদ্ভূত হইয়াছে তাহা ভবিষ্যতে তাহার সকল সুখ গ্রাস করিবে। এই শতশ্রামলা ভারতবর্ষে জন্ম গ্রহণ করিয়াও কত ব্যক্তি দুর্ভিক্ষরূপ সমুদ্রের গ্রাসে পড়িয়া দগ্ধ হইতেছে।

8. *Either*, Write a folk talk you may have heard.

Or, An essay on **one** of the following subjects :—

- (a) The profession you intend to follow on entering life.
- (b) Moral courage.
- (c) An Indian religious reformer.

1919

1. Give a short sketch of Sakuntala as depicted by Kalidas, laying stress on the peculiar excellence of her character.

2. Give an account of the social reforms under-taken by Vidyasagar, stating how far he succeeded in carrying them out.

3. Trace the narrative described in the Kapalkundala from the interview of Navakumar with the Kapalik till the former's release by the help of Kapalkundala.

4. Translate into Bengali any **one** of the following :—

(a) The inestimable advantages and blessings for which India is indebted to its connection with Great Britain are of so manifold nature that we cannot undertake even to touch on them as a whole ; but there is one boon, and this is surely of the greatest, to which the representatives of Universities feel entitled, and may be bound to refer specially—we mean the access which the union of the two countries has given us to the priceless treasures of modern western knowledge and culture, literature and science.

(b) As times went on Asoka's passionate devotion to the doctrine of the sanctity of animal life grew in intensity, and in 243 B. C. resulted in the production of the stringent code or regulations applicable to all classes of the population throughout the empire, without distinction of creed. Many kinds of animals were absolutely protected from slaughter in any circumstance ; and the slaying of animals commonly used for food by the flesh-eating population, although not totally prohibited, was hedged round by severe restrictions.

5. Rewrite the following, correcting all inaccuracies in idiom and grammar.

তোমার কুঠার সদৃশ বাহু রণক্ষেত্রের শত্রুর মস্তক বিদ্ধ করিতে সক্ষম। তোমার হৃদয়ের সজীবকুম্ভের সত্য উদয় হয়, তাহাতে তোমার বন্ধুবর্গ পরিতোষ হইয়া থাকেন। তোমার মনের দৃঢ়তা সাগরসদৃশ; তোমার বুদ্ধি গঙ্গাধারার স্থায় অটল, তোমার চরিত্র প্রবাহিনীর স্থায় ঋজু এবং তোমার অগাধ প্রেমরাশি শৈলবৎ ন্নিদ্ধ কোমল।

6. Elaborate the following into a short story :—

নদী সন্তরণ কালে এক সারমেয় বীর দস্তাগ্রে ধৃত মাংসখণ্ডের প্রতিচ্ছায়া দেখিয়া লোভ বশতঃ তাহা ধরিবার চেষ্টায় নিজের মাংসখণ্ড হারাইয়াছিল।

7. Write an essay on **one** of the following subjects :—

(a) Influence of novel-reading on youthful mind.

(b) How would you spend the money if an enormous wealth is placed at your absolute disposal.

(c) Describe an incident of Indian history that may have impressed you greatly.

1920

1. Translate any **one** of the following passages into Bengali :—

(a) Buddha was a king's son who forsook his kindred in order thenceforth to live on alms and devote himself in the first place to contemplation, and thereafter to the instruction of his fellow men. His teaching contains, in itself, absolutely nothing new; on the contrary, it is entirely identical with the corresponding Brahmanical doctrine; only the fashion in which Buddha proclaimed and disseminated it was something altogether novel and unwonted. For while the the Brahmins taught solely in their hermitages and received pupils of their caste only, he wandered about the country with his disciples, preaching his doctrine to the whole people.

(b) The songs of the Rik unfold to us particulars as to the time, place, and conditions of their origin and growth. In the more ancient of them the Indian people appear to us settled on the banks of the Indus, divided into a number of small tribes in a state of mutual hostility, leading a patriarchal life as husbandmen and nomads. Each father of a family acts as priest in his own house, himself kindling the sacred fire, and offering up praise and prayer to the gods. The free position held by women at this time is remarkable. We find songs of the most exquisite kind attributed to poetesses and queens, among whom the daughter of Atri appears in the foremost rank.

2. Show the noteworthy points in the character of Dusmanta as a typical Hindu sovereign.

3. Both Sakuntala and Kapal-Kundala were brought up in the midst of the wild beauty of Nature, far away from human habitations. Show how their distinctive environments influenced and developed their respective characters.

4. Refer to the incidents in the life of Vidyasagar, justifying Michael's estimate of his character that Vidyasagar had the wisdom of an ancient sage, the energy of an Englishman, and the heart of a Bengali mother.

5. Write a letter to a friend, mentioning the chief events of your life, and their bearing on your intellectual and moral development.

6. Correct all errors in the following stating reasons for your correction :—

এইভাবে কিং কাল অতিবাহিতের পর রাম ও সীতা উভয়েই শ্রান্ত বোধ করিলেন। সন্মুখে একটি নিতান্ত রমণীয় জলাশয় ছিল। নানা শ্রেণীর জলজ পুষ্প সকল তাহাতে শোভা-ধারণ করিতেছিল, ভ্রমরগণ মধুলোভে অন্ধ হইয়া তাহাদিগের চতুঃপার্শ্বে ঘূর্ণমাণ হইতেছিল, দেখিয়া উভয়েরই পঞ্চদশ দূরীভূত হইল।

7. Give the meanings of the undermentioned words, noting the difference in spelling.

গিরিশ and গিরীশ, স্ত and স্ত, দীপ and বীপ, and দূত and দূত।

1. Translate *Either* of the following passages into Bengali :—

(a) The Bauddha religionists carry their respects for animal life much further than the Brahmins ; their priests do not eat after noon, nor drink after dark, for fear of swallowing minute insects ; and they carry a brush on all occasions with which they carefully sweep every place before they sit down, lest they should inadvertently crush any living creation. Some even tie a thin cloth over their mouths to prevent their drawing in small insects with their breath.

(b) A side-door opened, and Josephine entered. Her face was as white as the simple muslin robe she wore. She was leaning upon the arm of her daughter. The whole assembly, upon the entrance of Josephine, instinctively arose. All were moved to tears. With her own peculiar grace, Josephine advanced to the seat provided for her. Leaning her pale forehead upon her hand she listened with the calmness of stupor to the reading of the act of separation.

2. Give in Bengali the gist of the story of Kiratarjuniya, with a special reference to the character of Draupadi as depicted by Bharavi.

3. *Either*, Illustrate in Bengali the resourcefulness and fortitude of Vimala in Durgeshnandini.

Or, Give in Bengali your estimate of the characters of Vidya-diggaja and Asmani.

4. Describe in Bengali the measure initiated by Vidyasagara for social reform, and their results in his life time.

5. Re-write the following, correcting all errors :—

জাতর মনোরঞ্জন করিতে যাইয়া সেই রমনী তদীয় সত্ত্বজাত শিশুটিকে অনন্তসঙ্গী অবস্থায় গৃহ পরিত্যাগপূর্বক রত্ননশালার ব্যাঞ্জন তৈল নিশেক করিতে মনোযোগী হইলেন । শিশুটি ইত্যবসরে খট্টা হইতে ভূপতিত হইয়া বিষম আঘাত প্রাপ্ত হইল ।

যে সকল অনভিজ্ঞ ব্যক্তি বাহারা সমস্ত বিষয় জ্ঞাত, তাঁহারা যদি অভিজ্ঞ অর্থাৎ জ্ঞানহীন লোকের দ্বারা উপহাসবৃত্ত হন, তবে সম্ভব অর্থাৎ দয়াবিহীন ব্যক্তিগণ অগ্রসর অর্থাৎ আনন্দিত হইতে পারেন, কিন্তু সমস্ত কোমল রূপ ব্যক্তির তাহাতে বিশেষ প্রতাপ হইবেন সন্দেহ নাই ।

6. Write an essay in Bengali on **one** of the following subjects :—

- Legal profession—its advantages and disadvantages.
- The study of Indian Vernaculars—its promises.
- Indian Epics—their influence in moulding our national character.
- Modern Science—its rapid development.

1. Translate any one of the following passages into Bengali :—

(a) The first quarter of a Brahmin's life must be spent as a student, during which time he leads a life of abstinence and humiliation. His attention should be unremittingly directed to the Vedas, and should on no account be wasted on worldly studies. He should treat his preceptor with implicit obedience, and with humble respect and attachment which ought to be extended to his family. He must perform various servile offices for his preceptor, and must labour for himself in bringing logs and other materials for sacrifice, and water for oblations. He must subsist entirely by begging from door to door.

(b) He should, indeed, refrain from all sensual enjoyments, should avoid all wealth that impedes his reading the Vedas, and should shun all worldly honour as he would shun poison. Yet he is not to subject himself to fasts or other needless severities. All that is required is, that his life should be blameless and occupied in the prescribed studies and observances. Even his dress is laid down with minuteness : and he may be easily figured (much as learned Brahmins are still), quiet, clean, and decent, his hair and beard clipped, his passions subdued, his mantle white, and his body pure.

2. Only two to be attempted :—

(a) Describe the part played by Bimala in the operation leading to the occupation of the fort of Birsinha by the Pathan's and their sequel.

(b) How do you reconcile Ayesha's self-control with her confessions of feelings before Osman. State the chief virtues of her character.

(c) Describe the share which Vidyasagar had in the formation of Bengali prose, and give a correct estimate of his literary position amongst his contemporary writers.

(d) Describe some incidents of Vidyasagar's life proving his kindness of heart and filial affection.

(e) Give the gist of the story of Naishad-Charitra, showing the merits and defects of Sriharsha's poetry.

(f) Show the points of the similarity and contrast between the poems of Magh and Bharavi.

3. Re-write the following in correct and elegant Bengali with proper punctuation :—

পরে জ্যোতিষিক জ্যোতিষির গ্রন্থ লইয়া সভাস্থল হইতে লগ্ন নিরূপণ করিয়া কুমার বাতাহরের কোষ্ঠী স্থির করিলেন। তাহার কলক্ৰান্তি এই সকল বিষয়েই উত্তম কিত্ত পিতৃজ্যোহী। মহারাজ ইহাতে হরিষে বিবাদ হইলেন। কুমারের প্রতীক্ষালান যথেষ্ট মতে করিলেন সময়ক্রমে মহাশয়ই

করিয়া অনপ্রাশন করিলেন নাম রাখিলেন প্রতাপাদিত্য। পরে কুমারের যুদ্ধি পাইতে লাগিল চন্দ্রকলার স্থায় অতিশয় ভক্তমান কুমার। রাজা বসন্ত রায়ের অতি প্রীতি কুমারের প্রতি।

4. Write an essay on any **one** of the following subjects :—

- (a) Indian's need for vocational education.
- (b) Indian poverty and its main remedies.
- (c) Obligations to your Alma Mater.
- (d) Effect of the non-co-operation movement on education.

1923

1. Translate any **one** of the following passages into Bengali :—

(a) Who the first inhabitants of India were we know not. In primeval days wild savage people inhabited the land, wandering to and fro along the river sides in search of food. The only record they have left of their existence are the chipped flint or stone arrow heads and axes, dug up to day in the alluvial deposits of the great river valleys. By degrees those aboriginal inhabitants became more civilized. They learned to smooth and polish their rude stone implements perforating them with wholes so as to attach them to handles.

(b) Mahavira is usually regarded as the real founder of the Jain religion. But the Jains themselves claim for their religion a far more venerable antiquity: they tell us that before Mahavira there lived not less than 33 *tirthankaras* or prophets who appearing at certain intervals preached the only true religion for the salvation of the world. The first of these prophets was King Rishava, who after laying down his royal power and transferring the realm to his son Bharata, the first universal monarch (*chakravartin*), became a holy man and a *tirthankara*.

2. Only *two* to be attempted.—

(a) Point out the peculiar excellence of Bhavabhuti as a landscape painter and a poet of emotion, and compare him with Kalidas.

(b) Compare Kalidas's *Sakuntala* with Shakespeare's *Tempest*, on the line of Rabindranath's critical estimate.

(c) 'Childhood shows the man, as morning shows the day.' Illustrate the truth of this from the life-history of Vidyasagar.

(d) Give the gist of the chapter headed জাতিতত্ত্ব of Srikantha

3. Re-write the following in correct and elegant Bengali :—

সেই বৃষ্টি পড়ে গেছিল একবারে শরীরে রাখখানটার। সে পড়ে গিয়া এমনই ভীম ও

উৎকট ডাক ঝারিয়াছিল যে ভয়ে পলাইয়া গিয়াছিল যত শিশুর দল। তার খুর-বিসিষ্ট একটা পাখানার ঢুকিয়া খণ্ড হইয়াছিল এবং লাদুলটা কর্দমাক্ত হইয়া একটা মৃদয় দণ্ডের স্থায় দেখাছিল। তার পিটে যে সর্করার থলিয়াটা ছিল, তার মুখ মুক্ত হওয়ার তথায় উপস্থিত হইয়াছিল শ্রেণীবদ্ধ যত পীপড়া-পংক্তি।

4. Write an essay on any **one** of the following subjects :—

- (a) The value of high education.
- (b) The post-graduate department of the Calcutta University.
- (c) The improvement of village sanitation in Bengal.

1924

1. Translate any **one** of the following passages into Bengali :—

(a) The prince himself from the back of his huge elephant had seen his army turned to confusion around him. But he did not turn to flight. So long as anybody of men in that seething mass preserved any appearance of order, the Paurava kept his elephant where the darts were flying. One gashed his bare right shoulder. When all hope was over, the royal elephant turned and made its way from the place of carnage. The Paurava had not gone far when a man came galloping after him. Coming within a short time he shouted to the Prince to have his elephant halted.

(b) The wife has been described in the Rigveda as 'the ornament of the home,' which goes to show the high esteem in which she was held. She was a loving and obedient wife, affectionate mother, and excellent mistress rising early with the dawn rousing all from sleep and directing the servants to go to their work. She busily applied herself to the performance of her house-hold duties, dusting, sweeping, or washing the floors, and scrubbing and cleansing the cooking pots and utensils. She bathed early, and offered with her husband the morning oblations to the sacred Fire, the Lord of the house.

2. Answer any **three** of the following questions :—

(a) In what sense do you consider the Ramayana to be the truly national epic of India ?

(b) Describe Kalidasa's conceptions of love as depicted in his *Sakuntala* and *Kumar-Sambhava*. Wherein does it differ from that of the Western poets ?

(c) Give an estimate of Ramtanu Lahiri's character as influenced and formed by the spirit of his times.

(d) Discuss the principal elements of Vidyasagar's greatness.

3. Briefly describe David Hare's life and work. ২

4. Re-write the following correcting all errors :—

উঁহার সততা দেখিয়া মনে হইল উঁহার সদৃশের অসম্ভাব নাই। উঁহার সহিত সখ্যতা করিলে শকল বিষয়েই যে সাক্ষ্যতা লাভ করিব তাহাতে অশংসয় হইলাম। আমি আয়াসী হইয়া কিছু বিলাশি হইয়াছিলাম এই কারণে শ্রম করিতে হইলে আমার চক্কর সম্মুখে চারিদিকে অন্ধকার যেন উদ্ভাসিত হইত।

5. Re-write the following in chaste and elegant Bengali.

তুমি কতকগুলি লম্বাচুড়া কথা বলে আপনার অন্তরের আসল ভাব যে ছাপিয়ে রাখছ তা একটা ছুঁধের ছেলে ও ধাঁ করে বুঝতে পারবে। আমার কাছে তোমার চাল খাটবেনা। তোমার মত ঢের ধড়িভাজ দেখছি। তোমার ছেঁদো কথায় ভুলে তোমাকে আরও টাকা দিয়ে আমি যে তোমার জহন্নমে যাবার পথ সাফ করে দেব তা কথখেনা মনে করো না।

6. Write an essay on **one** of the following subjects—

- (a) Adequate measures for preventing fumines.
- (b) Your ideal of female education.
- (c) The value of agriculture as a means of livelihood.

1925

1. Translate into Bengali *either* of the following passages :—

(a) What student of history, on his first visit to the site of the once renowned city of Pataliputra, can restrain his memory and refuse to be carried away to the remote past associated with this hallowed ground? What Delhi was to India in the Mahomedan period, what Calcutta was to India till recent years under British rule, Pataliputra was to India in pre-Moslem times, namely the Imperial City of Bharatvarsa. Historians tell us that Pataliputra though a small village in the days of Gautama Buddha, rapidly acquired unique importance. Bimbisara, king of Rajagriha, extended his dominions till they reached the river Ganges, which separated his kingdom from that of the Lichchhavis. The Lichchhavis soon fell a prey to intrigue, lost their independence, and the kingdom of Magadha was extended in all directions.

(b) It has been said that Sir Asutosh was a great lawyer. So indeed he was, but his greatness was greater than the greatness of a mere lawyer. I know he was a great judge, but here again his greatness was greater—far greater than the greatness of merely a great judge. It has been said that he was a great educationist.

Undoubtedly he was. He was one of the foremost, and if you count the number of educationists all the world over I doubt whether you come across a greater educationist than Sir Asutosh Mukerjee. But here again I stand on my original observation—he was far greater than merely a great educationist. His heart was with the nation. He was a builder. He tried to build this great Indian nation, and honour it by his activities. I know many were the plans he formed of work after retirement. Death has snatched him away, and I do not see before me any other man who can take up the work which he intended to take up.

2. Give a summary of the story in *Rajarshi*, emphasizing the character of Jaisinha.

3. What are the striking features of the character of Asoka as developed by Girishchandra ?

4. What were the noble qualities of Bhagabati Devi which were inherited by Vidyasagar ?

5. Discuss, with suitable illustration from Vidyasagar's life the following traits of his character—his indomitable will, unique devotion to parents, over-flowing kindness, and sturdy independence of character.

Or, What was the stage in which Vidyasagar found Bengali Prose, and how did he contribute to its further development ?

6. Write an essay on any **one** of following subjects :—

- (a) Asutosh Mookerjee.
- (b) Freedom of the Press.
- (c) The place of Hemchandra in Bengali Literature.
- (d) The woman's cause is man's : they rise or sink
Together, dwarfed or God-like, bond or free ;
If she is small, slight-natured, miserable,
How shall man grow ?

7. (a) Form one sentence, using in it the following words :—

শরণাগত, সশস্ত্র, অস্ত্রহীন, নিষিদ্ধ ।

(b) Re-write, correcting all errors—

সে যখন হাটতেছিল খোড়াইয়া খোড়াইয়া তখন হঠাৎ লাগিল তাহার পায় এমন একটা চোট বাহাতে সেই ঘা-টা বাহা তৎপূর্ব দিবস সে পাইয়াছিল বল খেলিতে গিয়া, তাহা হইতে লাগিল অজস্র রক্তপাত। সেদিন তাহার মন বাহা ছিল ফুলের মতন কোমল। তাহা ব্যগ্র হইয়া পড়িয়াছিল সহানুভূতির প্রত্যাশায়।

8. Give in your words the thoughts contained in *either* of the following :—

- (a) দেবতা মন্দির মাঝে ভক্ত প্রবীণ
 জপিতেছে জপমালা বসি নিশিদিন ।
 হেনকালে সন্ধ্যাবেলা ধূলি মাখা দেহে
 বস্ত্রহীন জীর্ণ দীন পশিল সে গেহে ।
 কহিল কাতরকণ্ঠে—“গৃহ মোর নাই,
 , এক পাশে দয়া করে দেহ মোরে ঠাই”
 সসঙ্কোচে ভক্তবর কহিলেন তারে
 “আরে আরে অপবিত্র দূর হয়ে যারে !”
 সে কহিল “চলিলাম”—চক্ষুর নিমিষে
 ভিখারী ধরিল মূর্তি দেবতার বেশে ।
 ভক্ত কহে, ‘প্রভু, মোরে কি ছল ছলিলে ।’
 দেবতা কহিল, ‘মোরে দূর করি দিলে ।’
 জগতে দরিদ্ররূপে ফিরি দয়া তরে
 গৃহহীনে গৃহ দিলে আমি থাকি ঘরে ।”
- (b) আমি ভয় করব না, ভয় করব না ।
 হু-বেলা মরার আগে
 মরব না, ভাই, মরব না ॥
 তরীখানা বাইতে গেলে
 মাঝে মাছে তুফান মেলে ;
 তাই—বলে হাল ছেড়ে দিয়ে
 কান্নাকাটি ধরব না ।”
 শক্ত যা তাই সাধতে হবে,
 মাথা তুলে রইব ভবে,
 সহজ পথে চলব ভবে
 পাকের পরে পড়ব না ॥
 ধর্ম আমার মাথায় রেখে
 চলব সিঁদে রাস্তা দেখে ,
 বিপদ যদি এসে পড়ে
 ঘরের কোণে সরব না ॥ ৷

1. *Either*, give a full history of the widow-marriage movement initiated by Iswar Chandra Vidyasagar.

Or, Estimate the value of Vidyasagar's contribution to the cause of development of Bengali literature.

2. (a) Describe the machinations of Raghupati for taking the life of Gobindamanikya.

(b) Show how a few words spoken by Hasi before her death produced a lasting effect on Gobindamanikya.

(c) Give the meanings of the following words used by Tata.

লদল, বলাই. ঘরি ।

3. Explain with reference to the context *one* from Group A and *two* from Group B :—

GROUP A

(a) অশোক । আজি হ'তে সৰ্ব্বভাগ করি

তব পদে,—

আজি হ'তে ধরণী শয়ন,

অন্ধাশনে অনশনে জীবন বাপন,—

লিলাইব রত্নাগারে আছে যত ধন,

আজি হতে দীন সেবা জীবনের সার ।

(b) অশোক । গুরুদেব—গুরুদেব ! দেখুন কতদিনে

আমার শান্তির অবসান হবে ! দিক

রাজ্য, অশোক নামে দিক !—বীতশোকের

ছিন্নমস্তক দেখেছি, রাজরাণীকে বনবাসিনী

করেছি. আজ আমার বংশধর কুনাল

চক্ষুহীন । পরমহৃদ প্রভুভক্ত অকাল

মৃত । প্রভু, আমি কি করে জীবন ধারণ করবো ।

GROUP B

(a) এমন সময় সহসা মল্লিকের ভিত্তির উপরে ছায়া পড়িল । নক্ষত্ররায় পশ্চাতে চাহিয়া দেখিলেন—রাজা । চকিতের মধ্যে নেশা সম্পূর্ণ ছুটিয়া গেল । নিজের ছায়ার চেয়ে নিজে মলিন হইয়া গেলেন । দ্রুতবেগে নিম্নিত্র ঐশ্বকে কোলে তুলিয়া লইয়া গোবিন্দমাণিক্য প্রহরীদিগকে কহিলেন, “ইহাদের দুজনকে বন্দী কর” ।

(b) রাজা কহিলেন, “কেন মারিবে ভাই? রাজ্যের লোভে? তুমি কি মনে কর রাজ্য কেবল সোনার সিংহাসন, হীরার মুকুট ও রাজছত্র? রাজ্য পেতে চাও ত সহস্র লোকের সহস্রথকে আপনার বসিয়া গ্রহণ কর—এ যে করে সেই রাজা, সে আপনার পর্ণ কুটীরেই থাক আর প্রাসাদেই থাক”।

(c) তোমার এই অত্যধিক নৃশংস আচরণ দ্বারা যে উপদেশ লাভ করিয়াছি, তাহাতে অস্তিত্ব এই মহোপকার হইয়াছে, যে আমি আর কখন এরূপ যন্ত্রনাতোগের পথ প্রস্তুত করিব না। বৎসে! তুমি যে আমার উপকার করিয়াছ, তাহা তোমার কিছুমাত্র বোধ নাই। আমি ভদ্রপত্ৰাণ ছিলাম এবং বাহাতে তোমার স্খীতিলাভ হয় তদ্বিষয়ে প্রাণপণে যত্ন করিতাম। কিন্তু তুমি তাহার বিনিময়ে আমার বন্ধুত্বকে বজ্রপ্রহার করিয়া গিয়াছ।

4. Give in your own words the ideas contained in the following :

চিত্ত যেথা ভয় শূন্য, উচ্চ যেথা শির,
জ্ঞান যেথা মুক্ত, যেথা গৃহের প্রাচীর
আপণ প্রাক্ষণতলে দিবসধর্মরী
বহুধারে রাখে নাই খণ্ড ক্ষুদ্র করি.
যেথা বাক্য হৃদয়ের উৎসমুখ হ’তে
উচ্ছসিয়া উঠে, যেথা নির্ধারিত শ্রোতে
দেশে দেশে দিশে দিশে কর্মধারা ধায়
অজস্র সহস্রবিধ চরিতার্থতায়;
যেথা তুচ্ছ আচারের মরুভালুনাশি
বিচারের শ্রোতপথ ফেলে নাই গ্রাসি,
পৌরুষের করে নি শতধা; নিতা যেথা
তুমি সর্ব কর্ম চিন্তা আনন্দের নেতা,—
নিজ হস্তে নির্দয় আগাত করি’ পিতঃ
ভারতের সেই স্বর্গে কর জাগরিত।

5. Translate into Bengali the following passage :—

India is bowed with sorrow at the passing of a king, for kingly was Deshbandhu Das in every impulse and gesture of his life, royal alike in the splendour of his bounty and the splendour of his renunciation. He died as all great men should, swiftly translated from

mortality to immortality in the richest hour of his achievement, in the full glamour of his fame and power. He was the idol of the nation, and he served his mother-land with unsurpassed devotion. Thus is his illustrious memory secure from the challenge of time and change, enduring as the mighty Himalayas that stood sentinel at his death bed and saluted his heroic soul.

9. (a) Write short sentences to illustrate the use of any *four* of the following words :—

গড়ালিকা, বিভূতি, নিয়ন্ত্রিত, অকুতোভয়, মাৎসর্য্য।

(b) Re-write the following, correcting all errors :—

তাহার হৃদয় আকাশ করিত করিয়া যে শোক শূল প্রবাহিত হইয়া গেল, তাহার ছিন্নমূল তরুর স্থায় তিনি দক্ষ হইলেন ; কিন্তু তিনি সেই সময়ে অসহ হৃদয়ের কষ্টে সহিষ্ণুতার প্রতিমূর্ত্তির স্থায় আন্দোলিত হইতে লাগিলেন।

7. Write an essay on **one** of the following subjects :—

(a) *Public opinion* : various stages of its development ; how it is generally formed, and how it should be formed ; influence of leaders, and its stability ; its value as a check upon Government ; proper use of leaders' influence, and the consequences of its abuse.

(b) *Bengali* : as a medium of instruction upto Matriculation stage : its desirability from an academic stand-point ; its effect on national consciousness ; whether, and how far, the defects in the present system will disappear ; possibility of its further extension to higher stages ; practical difficulties if any to which its immediate and universal application may give rise, and how they can be met.

(c) *The Story of Nalo-Damayanti* : Damayanti's *sayambara* and her wedding ; the jealousy of Puskar, and how he succeeded in dethroning his brother ; sufferings of Nala and Damayanti while in exile ; how they were separated ; how Nala saved himself, the story of the re-union.

1927

1. Relate the incident that led to the composition of *Tilottama-Shambhab*, and show in what ways the poem marks the beginning of an epoch in Bengali literature.

2. With regard to Krishna Kanta's Will—

(a) Justify the name given to the book by the author ;

(b) consider the ideals of conjugal relations inculcated by the author, and show why no reunion between Bhomra and her husband could take place.

3. প্রতিজ্ঞায় পরশুরাম, দাতাকর্ণ দানে, স্বাতন্ত্র্যে সে' কুল কাঁটা, পরিজাত আশে।
ইংরেজীর যিয়ে ভাজা সংস্কৃত "তিস", টোল স্কুলের অধ্যাপক দুয়েরই "কিনিস"।

Justify, with suitable illustrations from Vidyasagar's life, the above criticism on his character.

4. Explain fully the following passages :—

(a) পৃথিবীর সভ্য সমাজের মধ্যে ভারতবর্ষ নানাকে এক করিবার আদর্শরূপে বিরাজ করিতেছে, তাহার ইতিহাস হইতে ইহাই প্রতিপন্ন হইবে।

(b) শকুন্তলায় আরম্ভের তরুণ সৌন্দর্য মঙ্গলময় পরম পরিণতিতে সফলতা লাভ করিয়া মর্ত্যকে স্বর্গের সহিত সম্মিলিত করিয়া দিয়াছে।

5. Elaborate the ideas contained in the following passages :—

(a) যে কহে অধিক, মিছা সে কহে অধিক

(b) কড়ায় কড়া, কাহণ কাণ।

6. Translate into Bengali the following passage—

Go, seek out the men who have done the most for their own and the general good, and you will find they are—who ? Wealthy, leisurely people who have abundance of time to themselves and nothing to do ? No, they are the men who are in ceaseless activity from January to December. Such men, however pressed with business, are always found capable of doing a little more, and you may rely on them in their busiest seasons with ten times more assurance than on idle men. There is an instinct that tells us that the man who does much is most likely to do more, and to do it in the best manner, The reason is that to do increases the power of doing.

7. (a) Give in your own words the thoughts contained in the following passage :—

তোমার প্রবল পিতৃম্বেহ

ধনিয়া উঠুক আজি কঠিন আদেশে !

করো মোরে সম্মানিত নবনীরবেশে,

দুঃসহ কর্তব্যভারে দুঃসহ কঠোর

বেদনার ; পরাইয়া দাও অঙ্গে মোর

কতচির অলঙ্কার । ধন্ত করো দাসে
সকল চেষ্টার আর নিষ্ফল প্রয়াসে ।

(b) Frame a single sentence illustrating the use of the following expressions :—

অলঙ্কারময়ী, নকত্রপুশ, গগনোত্তান ।

8. Write an essay under any one of the following headings—

- (a) Plain living and high thinking.
- (b) Patriotism as a laudable virtue in modern life.
- (c) No cross, no crown.

1928

1. *Either*, What was the stage in which Vidyasagar found the Bengali Prose? Discuss how Vidyasagar contributed to the development of the Bengali language and literature, giving a complete list of his works.

Or, Justify on the line of Rabiindranath, the following remarks of Goethe on Sakuntala—

‘Would’st thou the young year’s blossoms
and the fruits of its decline,
And all by which the soul is enraptured,
feasted and fed,
Would’st thou earth and heaven
itself in one sole name combine,
I name, thee, O Sakuntala,
and all at once is said.’

2. With regard to Krishna Kanta’s Will—

নারীত্বের দিক দিয়া রোহিনীর জীবন ব্যর্থ হইয়া গেল কোন্ অপরাধে ও কাহার অপরাধে ?
সাংসারিক দিক দিয়া ভ্রমরের জীবন ব্যর্থ হইয়া গেল কোন্ অপরাধে ও কাহার অপরাধে ?

3. Give, in your own words, the *Pauranik* story of *Britra* on which Hemchandra’s *Britra-Sanhar* is based.

4. Explain with reference to context, any *three* of the following extracts, but not more than *two* from each group—

GROUP A

(a) মাতৃভাষা বাংলা বলিরাই কি বাঙালীকে দণ্ড দিতেই হইবে? এই অজানকৃত অপরাধের জন্ত সে চিরকাল অজান হইয়াই থাক্—সমস্ত বাঙালীর প্রতি কয়জন শিক্ষিত বাঙালীর এই রায়ই বহাল রহিল? যে বেচারী বাঙালা বলে সেই কি আধুনিক মনুসংহিতার শূত্র?

(b) সমুদ্র-যাত্রা আমরা সকল দিক দিয়াই ভয়ে ভয়ে বন্ধ করিয়া দিয়াছি—কি জলময় সমুদ্র, কি জ্ঞানময় সমুদ্র! আমরা ছিলাম বিশ্বের—দাঁড়াইলাম পল্লীতে। সঞ্চয় ও রক্ষা করিবার জন্ত সমাজে ভীত শ্রী-শক্তি আছে, সেই শক্তিই, কোত্‌হলপর পরীক্ষাপ্রিয় সাধনশীল পুরুষ-শক্তিকে পরাভূত করিয়া একাধিপত্য লাভ করিল। তাই আমরা জ্ঞানরাজ্যেও দৃঢ়সংস্কারবদ্ধ দ্বৈধ-প্রকৃতি-সম্পন্ন হইয়া পড়িয়াছি।

(c) গুন গুন করিতে করিতে যখন একটা লাইন লিখিলাম—“তোমার গোপন কথাটি, সখি, রেখো না মনে”—তখন দেখিলাম সুর যে জয়গায় কথাটা উড়াইয়া লইয়া গেল, কথা আপনি সেখানে পায়ে হাঁটিয়া গিয়া পৌঁছিতে পারিত না। তখন মনে হইতে লাগিল আমি যে গোপন কথাটি শুনিবার জন্ত সাধাসাধি করিতেছি তাহা যেন বনভ্রমীর শ্রামলিমার মধ্যে মিলাইয়া আছে, পূর্ণিমা রাত্রির নিশ্চল শুভ্রতার মধ্যে ডুবিয়া আছে,—তাহা যেন সমস্ত জল-স্থল-আকাশের নিগূঢ় গোপন কথা।

GROUP B

(a) শিষ্যবৃন্দ আনন্দে ঘেরিয়া তপোধনে,
শুনিছে মহর্ষি-বাক্য—অনন্ত মানস;
হায় রে যেমতি বাগীধরী-বীণাধ্বনি
শুনিতে উৎসুক চিত্ত অমর মণ্ডলী—
সৃষ্টির উৎসব দিনে—পদ্মাসনে যবে
দেব-চিত্ত মোহকর শুনান ভারতী

(b) হিংসার ভাজন যদি থাকে বহুদূরে,
হি সকের চিত্ত তবু কালকূটে পূরে;
নিকটে আসিলে বিষ উথলে তখন,
অসহ্য হৃদয়ে জ্বলে চিতার দহন।
আছিল বিশ্বাস অগ্রে গরবে কেবল,
শতীর সুখ্যাতি ব্যাপ্ত ত্রিলোক মণ্ডল;

সৌরভ যে এত তার মাধুর্য্য নির্মল
 না জানিত, এবে শুনি হইল পাগল ।
 (c) হের, হেরেশ্বরী, হের চারিধারে কত
 অমরের কীৰ্ত্তিস্তম্ভ ! আহা, কি স্থলর
 জঙ্ঘ-ভেদি প্রতিমূৰ্ত্তি বিরাজে ওখানে,
 ভগ্ন ডানি ভুজ এবে—তবু কি স্থলর,
 নমুচিন্দন নাম বা হ তে ইঞ্জের,
 হের. ইঞ্জরমা, সেই নমুচি নিধন
 হতেছে বাসব হস্তে !

5. Translate into good Bengali the following passage :—

I am low born ; I have seen everything. I have endured everything. I have been hungry, not only myself, but my mother has been hungry, my sisters and brothers, all those who were near and dear to me. You do not know what that means, and I hope you may never know. Of humiliations, of the times I have been obliged to be false to my conscience, my innermost beliefs, I say nothing. And apart from what I have suffered, I have seen a great deal. Misery and degradation have no secrets from me. I have seen factories and workshops and mines where human beings are herded together like beasts to earn their deaths, for it would be irony to pretend that they were earning a living ; I have seen jails constructed to imprison those who are so wanting in resignation that they rise, rather than submit to the blind injustice and cruelty of their fate ; I have seen asylums and hospitals which gather up those who fall by the wayside, who do resign themselves, and believe me, there is small charity in them, and no mercy.

6. Give in your own words the thoughts contained in the following passage—

জীবনে যত পূজা হ'ল না সারা,
 জানিহে জানি তাও হয় নি হারা ।
 যে ফুল না ফুটিতে, ঝরেছে ধরণীতে,
 যে নদী মরুপথে হারালো ধারা,
 জানি হে জানি তাও হয় নি হারা ।
 জীবনে আজো বাহা রয়েছে পিছে,
 জানি হে জানি তাও হয় নি মিছে ।

আমার অনাগত আমার অনাহত
তোমার বীণা-তারে বাজিছে তা'রা,
জানি হে জানি তাও হয় নি হারা।

7. (a) Re-write any *two* of the following after necessary corrections giving reasons in each case :—

(i) সেই অতুল পর্বতশিখর হইতে ললরাশি দুর্গিবারবেগে নিম্নভূমিতে পতিত হইয়া সমস্তই ধ্বংস করিয়া দিল।

(ii) প্রগট্ট গৌরব উচ্চার করিতে আমাকে সাহায্য করিয়া আপনি আমার মহত্বপূর্ণ সাধন করিয়াছেন।

(iii) তিনি এরূপ দায়ীত্বজ্ঞানহীন জানিলে আমি কখনই তাঁহার সঙ্গে যাইতে সন্মত হইতাম না।

(b) Correct the following sentence if it is necessary. In either case state your reason :—

কুকুর আপনার ভালো বটে, কিন্তু ভালোমানুষ নয়।

8. Write an essay on any **one** of the following subjects :—

(a) কহিল ভিকার খুলি, হে টাকার তোড়া,
তোমাতে আমাতে ভাই ভেদ অতি খোড়া,—
আদান প্রদান হোক! তোড়া কহে রাগে
সে খোড়া প্রভেদ টুকু ঘুচে যাক আগে!

(b) হে নিত্যকলাগী লক্ষ্মী, হে বঙ্গ জননী
আপন অঙ্গ প্রসঙ্গ করিছ আপনি
অহর্নিশি হস্ত মূখে।

এ বিশ্ব সমাজে

তোমার পুত্রের হাত নাহি কোন কাজে
নাহি জ্ঞান সে বারতা। তুমি শুধু মাগো,
নিজিত শিয়রে তার নিশি দিন জাগো
মলয় বীজন করি। রয়েছ মা ভুলি
তোমার শ্রীঅঙ্গ হতে একে একে খুলি
সৌভাগ্য ভূষণ ভব, হাতের কঙ্কণ,

তোমার ললাট-শোভা সীমন্ত রতন,
তোমার গৌরব, তারা বাঁধা রাখিয়াছে
বহুদূর বিদেশের বণিকের কাছে ।

1929

1. Describe Vidyasagar as a social reformer.

2. *Either*, Analyse the character of ব্রহ্ম ।

Or, “যেমন বাহুজগতে মাধ্যাকর্ষণে তেমনি অন্তর্জগতে পাপের আকর্ষণে, প্রতি পদে পতনশীলের গতি বর্ধিত হয় ।”

Show the truth of the principle quoted above, with regard to the careers of গোবিন্দলাল and রোহিণী ।

3. *Either*, Show how far the speeches of the gods in the first Canto of *Vrtra-Sashara* accord with their respective characters. What English original has been followed by our poet in the conception of his council of the gods ?

Or, Discuss the characters of ঐন্দ্রিলা and ইন্দুবাল, laying special stress on the points of contrast in them.

4. Give the substance of Rabindranath's sketches of বক্ষিমচন্দ্র চট্টোপাধ্যায়, রাজেন্দ্রলাল বিদ্য and রাজনারায়ণ বসু as given in his জীবনস্মৃতি ।

5. Amplify the thought contained in the following passage—

কত যুগা যৌবনেতে, চড়ে আশা-বিমানতে
ভাবে হুড়াইবে ভবে যশঃপ্রভা-আভারে ।

* * * * *

কিশোর গাভীবধারী জামদগ্ন্য দৈত্যহারী
ক্ষুদ্র ক্ষুদ্র কালিদাস কত ডোবে পাথারে ।

6. Translate *either* (a) or (b) into good Bengali :—

(a) The sorrow for the dead is the only sorrow from which we refuse to be divorced. Every other wound we seek to heal—every other affliction to forget ; but this wound we consider it a duty to keep open—this affliction we cherish and brood over in solitude. Where is the mother who would willingly forget the infant that perished like a blossom from her arms, though every recollection is

a pang? Where is the child that would willingly forget the most tender of parents, though to remember be but to lament? Who, even in the hour of agony, would forget the friend over whom he mourns?

(b) The poet was after all the seer of truth; he was to enjoy leisure, to seclude himself from the world, to keep his eye clear to see the works of God, and to discern God behind them working silently. The poet was to be the inspirer of earnest effort, he was to add to the humble toil of daily life the thrill, the glory, that touches and concentrates all honest labour doggedly done.

7. Rewrite the following in chaste Bengali, correcting all errors :—

আকাশে ছোট ছোট নক্ষত্র উড়ীয়মান হইয়া নীল তরুর গায়ে শালা ফুলের স্তায় ভাসিতে লাগিল। সাক্ষ্য সমীরণ বাগানের পুষ্পবাস সঙ্কলিত করিয়া ভ্রমণ করিতে লাগিল। আমরা গবাক হইতে দেখিলাম কান্তের মত তৃতীয়ার চন্দ্র আকাশে হাসিতেছে। নদীহাদায় মাঝিয়া এক তানে ভাটিয়াল গান গাহিয়া প্রাণের কলরে এক অপূর্ব আনন্দ বিক্ষেপ করিতেছে।

8. Write an essay in Bengali on one of the following subjects :—

(a) The uses of adversity: its after-effects—the moral lessons it teaches—its influence in imparting energy and in humanizing the character. (Illustrations)

(b) Village reconstruction, sanitation—agriculture—industries and trades—co-operative work.

(c) Mahatma Gandhi—his life and teachings.

1930

All answers to be in Bengali either in the Standard Literary Style (সাধু ভাষা) or in the Standard Colloquial (চলিত ভাষা) avoiding a mixture of forms.

QUESTIONS ON SET BOOKS : 40 marks.

1. *Either*. Write a short sketch of the personality and character of Iswar Chandra Vidyasagara, illustrating your answer by referring to incidents and anecdotes from his life.

Or, 'Iswar Chandra Vidyasagara was one of the greatest educationists of his time.' Discuss the above statement.

2. *Either* Write brief character-sketches of *Bhramar* and *Madhabinath*.

Or, '*Krishnakanter Uil* is the most psychological of Bankim Chandra's novels', How far is the above remark true?

Or, Is *Krishnakanter Uil* a novel with a purpose? If so, what does Bankim Chandra want to inculcate through it?

3. *Either*, Wherein in your opinion do the poetic excellences of the *Vritra-sanhar* lie? How far do the supernatural elements in it affect the poem as a work of art?

Or, Give in your own words the scene which impresses you most in the *Vritra-sanhar*.

Or, Analyse briefly the characters of *Vritra* and *Indra*.

4. *Either*, What are Rabindranath's arguments in favour of the mother tongue as the vehicle of instruction in our country?

Or, Describe, after Rabindranath, the natural scenery of the Himalayas.

Or, Explain *two* of the following passages, referring to the context:—

(a) ভাগ্যমন্ডের ছেলে ধাত্রীহস্তে মোটাসোটা হইয়া উঠুক না কিন্তু গরীবের ছেলেকে তাহার মাতৃহস্ত হইতে বঞ্চিত করা কেন?

(b) এই জন্তই সর্বপ্রকার কলাবিদ্যা সম্বন্ধে শিক্ষিত ও অশিক্ষিতের আনন্দ ভিন্ন ভিন্ন পথে যায়।

(c) "বৈরাগ্য-সাধনে মুক্তি সে আমার নয়।"

(d) প্রকৃতির সঙ্গে মানুষের অন্তরের সম্বন্ধটা বড়ো বিচিত্র।

Essay, Translation and Composition :

5. Write an essay in Bengali on **one** of the following themes:—

(a) Your favourite Bengali author: why you like him best—his works—his characteristics—his greatness—his influence upon yourself and upon his readers in general.

(b) Social Reform and Reconstruction—the evils in present day Indian life and society a drag on our progress—diversity of problems with different social groups—the lines along which change should be introduced—the forces of tradition and the scriptures, and social reform in your own community.

(c) Your ideal man of action from Indian history; his times and achievements—his place in the history of the country—how far his personality and his endeavour and example can inspire us at the present day.

(d) A journey by river in Bengal; rural scenery—the people and their avocations—glimpses of social and economic life—the importance of the water-ways of Bengal.

6. Translate into Bengali one of the following passages—

(a) Maternal love is the visible providence of our race. Its influence is constant and universal. It begins with the education of the human being at the outstart of life, and is prolonged by virtue of the powerful influence which every good mother exercises over her children through life. When launched into the world, each to take part in its labours, anxieties, and trials, they still turn to their mother for consolation, and not for counsel, in their times of trouble and difficulty. The pure and good thoughts she has implanted in their minds when children continue to grow up into good acts long after she is dead; and when there is nothing but a memory of her left, her children rise up and call her blessed. Posterity may be said to lie before us in the person of the child in the mother's lap.

(b) Diversity of religion is often made the pretext for hostilities, and attempts to have a common religion for all mankind have contributed not a little to the unrest and sorrow of the world. The passion to impose one's own opinion on others is natural to the selfish temper. To believe that we have the exclusive possession of truth, or that our reading of the meaning of the universe is accurate, is an illusion of egotism. A single religion for all mankind will take away from the spiritual richness of the world. The religions to whatever denominations they may belong, share the same outlook and spirit and they possess a serenity which is undisturbed by the strokes of fortune.

7. Either, Summarize the following passage, bringing out what you consider to be the main idea—

যখন দেখি আমার ঐ বেহারা ধৈর্য্যসহকারে মুকভাবে পাখা টানিয়া যাইতেছে, ছেলে দুটো উঠানে গড়াইতেছে, পড়িয়া গিয়া চাঁৎকার পূর্বক কাঁদিয়া উঠিতেছে, বাপ মুখ ফিরাইয়া কারণ জানিবার চেষ্টা করিতেছে, পাখা ছাড়িয়া উঠিয়া যাইতে পারিতেছে না জীবনে আনন্দ অল্প, অথচ পেটের আলা কম নহে; জীবনে যত বড় দুর্ঘটনা ঘটুক দুই মুষ্টি অল্পের জন্ত নিয়মিত কাজ চালাইতে হইবে, কোন ক্রটি হইলে কেহ মাপ করিবে না—যখন ভবিষ্যি দেখি এমন অসংখ্য লোক আছে, বাহাদের দুঃখ কষ্ট বাহাদের মনুষ্যত্ব আমাদের কাছে যেন অনাবিকৃত; বাহাদিগকে আমরা কেবল ব্যবহারে লাগাই এবং বেতন দিই, স্নেহ দিই না, সাধনা দিই না, শ্রদ্ধা দিই না,—তখন বাস্তবিকই মনে হয়, পৃথিবীর অনেকখানি যেন নিবিড় অন্ধকারে আবৃত, আমাদের দৃষ্টির একেবারে অগোচর। কিন্তু সেই অজ্ঞাত-নামা দীপ্তিহীন দেশের লোকেরাও ভালবাসে এবং ভালবাসার যোগ্য। আমার মনে হয়, বাহাদের মহিমা নাই, বাহারা একটা অথচ্ছ আবরণের মধ্যে বদ্ধ হইয়া আপনাকে ভালোরূপে ব্যক্ত করিতে পারে না, এমন কি, নিজেকেও ভালোরূপে

চেনে না, মুকম্বু ভাবে হৃৎকম্পিতবেদনা সহ করে, তাহাদিগকে মানবরূপে প্রকাশ করা, তাহাদিগকে আমাদের আত্মীয়রূপে পরিচিত করাইয়া দেওয়া, তাহাদের উপর কাব্যের আলোক নিক্ষেপ করা আমাদের এখনকার কবিদের কর্তব্য।

Or, Amplify the thought contained in one of the following passages :—

- (a) প্রাচীরের ছিদ্রে এক নামগোত্রহীন
ফুটিয়াছে ছোটো ফুল, অতিশয় দীন।
ধিক্ ধিক্ করে তারে কাননে সবাই—
স্বৰ্ঘ্য উঠি বলে তারে—“ভালো আছো ভাই?”
- (b) টিকি মুণ্ডে চড়ি উঠি কহে ডগা নাড়ি—
“হাত পা প্রত্যেক কাজে ভুল করে ভারি।”
হাত পা কহিল হাসি,—“হে অভ্যস্ত চুল,
কাজ করি, আমরা যে তাই করি ভুল।”

3. Rewrite the following into good and correct Bengali, after correcting all errors in spelling, grammar and idiom :—

অনেক মানুষেরা—তাহাদের দেহ হৃৎকম্পিত, তাহারা পরিশ্রম করিতে অস্বীকার হইয়া এবং অগত্যা অপব্যয় পূর্বক অষ্টপ্রহর নিরলস ভাবে কাল কাটাইয়া পরিণামে হৃৎকম্পিত নীপিড়ীত হইয়া নৈরাশ হইয়া থাকে। সহস্র দোষ স্বত্বেও এই লোকসকলের দুঃখবস্থা দেখিলে আমাদের অন্তকরণ সময় সময় হৃৎকম্পিত বিদ্ধ না হইয়া যায় না। কিন্তু প্রশ্ন এই যে ঈদৃশ দায়িত্বশূন্য ব্যক্তিগণ সাহায্যযোগ্য কি না।

1931

All answers to be in Bengali, either in the Standard Literary

*Style (সাধু ভাষা) or in the Standard Colloquial (চলিত ভাষা),
avoiding a mixture of forms.*

QUESTIONS ON SET BOOKS : 40 marks.

1. Give a brief critical sketch of the contents of the *Meghanada* *badha* *Kavya* Canto II (or Canto III), mentioning the points in which Michael Madhusudan Datta was influenced by other writers, Indian or European, for both incident and character.

2. Give a short estimate of *either* the character and personality, or the literary achievement, of Maichael Madhusudan Datta.

3. *Either*, Write a brief critical appreciation of the *Krishna-kānter Uil* in both its plot-construction and character-painting.

Or, Sketch the character of Gobindlalal.

4. *Either*, Expand, after Rabindranath, the thought contained in *two* of the following passages :—

(a) পৃথিবীর সভ্য-সমাজের মধ্যে ভারতবর্ষ নানাকে এক করিবার জন্ত আদর্শ-রূপে বিরাজ করিতেছে।

(b) গেটের এই শ্লোকটী আনন্দের অতীতি নহে, ইহা রসজ্ঞের বিচার।

(c) “একবার তোরা মা বলিয়া ডাক।”

(d) আমার সমস্ত আকাশ ঝর ঝর করে বলছে, “তৈসে গোষায়বি হরি বিনে দিন রাত্তিয়া।”

Or, Write a Summary of Rabindranath's reminiscences of *two* of the following personalities :—(a) Rajendralal Mitra ; (b) Father Da Peneranda ; (c) Bankim Chandra Chatterjee ; (d) Rabindranath's Father ; (e) His Latin teacher in England.

ESSAY, TRANSLATION AND COMPOSITION : 60 marks.

5. Write an essay in Bengali on **one** of the following themes—

(a) Village Reconstruction : its necessity for national well-being—problems of village life in your own district—natural advantages and disadvantages—the economic situation affecting the various social strata—the religious, cultural, and social outlook—what the young men should do.

(b) A critical appreciation of some book, that has moved you deeply : nature and contents and character of the book—its excellences, and defects if any—in what way it has influenced you—how it can influence others, and society at large.

(c) Culture : your conception of culture—influence of the home and of education, and of the social, religious, and political environments on culture—the bearing of culture on one's personal character as well as social and public life.

(d) The Period of Indian History which has the greatest appeal for you (e. g. the Vedic or the Maurya, the Gupta or the Mogul) : great men of the period—the cultural life, the period in philosophy and literature, art and science—social and economic advance, importance of the period in indian history and its place in world history.

6. *Either, Summarize the following passage, bringing out the main idea :—*

পাশ্চাত্য সভ্যতার সংঘর্ষে আর বাহাই হউক, আমাদের পুরাতন বিচিত্র উৎসব-কলা যে ক্রমশঃ বিলুপ্ত হইতে বসিয়াছে সে বিষয়ে আর কোন সন্দেহ নাই। দোল দুর্গোৎসবই কি, বার ত্রাত অনুষ্ঠানই কি, আর জাতকর্ষ অন্নপ্রাশন বিবাহাদি সংস্কারগুলিই বা কি অল্প দিন মধ্যে আমাদের সকল ক্রিয়া-কর্মেই যেন কি একটি পরিবর্তন হ্রস্ব হইয়াছে—প্রাচীনকালে ইহার মধ্যে যে গুস্ত আনন্দটুকু ছিল তাহা বৃষ্টি আর থাকে না, ইহার ব্যাপক সার্বজনীন ভাব সঙ্কুচিত হইয়া গিয়া ক্রমশঃ ইহা ব্যক্তিবিশেষের সমারোহময়ী তামসিকতা-মাত্রে আসিয়া না পরিণত হয়! কারণ আমাদের দেশে সমাজ-বন্ধন-গুণেই হউক বা লোকের প্রকৃতি-গুণেই হউক, উৎসবমাত্রেই চতুষ্পাথের সর্বসাধারণের যেন একটি চিরন্তন অধিকার ছিল; আমার গৃহের পূজা-পার্বণে, আমার পারিবারিক সকল গুস্তকর্মে কেবলমাত্র আমি এবং আমার গৃহিণীর নিকট-সম্পর্কায়গণ নহে, কিন্তু নিকটস্থ সমস্ত গ্রামের, চতুষ্পাথস্থ সমস্ত পল্লীর অন্তরে উৎসব ঘনীভূত হইয়া আসিত, এবং সকলেরই মনে হইত যেন তাহার নিজের বাড়ীর কাজ। এক্ষণে নবাগত সভ্যতা ব্যক্তিগত স্বাতন্ত্র্যরক্ষাচ্ছলে আত্মপরের মধ্য ব্যবধান ক্রমশঃই দূরতীকরণ করিয়া তুলিতেছে—আমরা সকল অধিকার আইনের পাকা মাপকাঠির সাহায্যে নূতন করিয়া বুঝিতেছি; হুতরাং ফলের কাঁচা সরস স্বাদকে অক্ষুণ্ণ রাখা অনেক স্থলেই অত্যন্ত কঠিন হইয়া উঠিতেছে।

Or, Amplify the thought contained in *one* of the following passages :—

- (a) চন্দ্র কহে, বিধে আলো দিয়েছি ছড়ায়,
কলঙ্ক যা আছে তাহা আছে মোর গায়ে।
- (b) কেরোসিন শিখা বলে মাটির প্রদীপে.—
“ভাই বলে ডাকো যদি, দেবো গলা টিপে।”
হেন কালে গগনেতে উঠিলেন চাঁদা,
কেরোসিন বলি উঠে, “এসো মোর দাদা!”

7. Translate into Bengali *one* of the following passages—

(a) Educate, or govern, they are one and the same word. Education does not mean teaching people to know what they do not know. It means teaching them to behave as they do not behave. And the true ‘compulsory education’ which the people now ask of you is not catechism, but drill. It is not teaching the youth of the country the shapes of letters and the tricks of numbers; and then

leaving them to turn their arithmetic to roguery, and their literature to lust. It is, on the contrary, training them into the perfect exercise and kingly continence of their bodies and souls. It is a painful, continual, and difficult work ; to be done by kindness, by watching, by warning by precept, and by praise, and above all, by example. Compulsory ! Yes, by all means ! 'Go ye out into the high-ways and hedges, and compel them to come in.' Compulsory ! Yes, and gratis also.

(b) This city of Calcutta, which offered its shelter to thousand upon thousands of men had become like a steel trap. He could see no way out. The whole body of people was conspiring to surround and hold him captive—this most insignificant man, whom no one knew. Nobody had any special grudge against him yet everybody was his enemy, The crowd passed by, brushing against him ; clerks from different offices ate their lunch on the road-side out of plates made of leaves ; a tired wayfarer on the *maidan* was lying under the shade of a tree, with one hand beneath his head, and one leg crossed over the other, up-country women crowded into hackney carriages, were on their way to the temple ; a *chuprassie* came up with a letter and asked him to read the address on the envelope,—so the after-noon went by, till one by one the offices began to close. Carriages started off in all directions, carrying people back to their homes.

8. Rewrite the following after correcting all errors in spelling, grammar and idiom—

বহু শব্দবি উপবেশন করিয়া ২ একাকি অধ্যাপনা করার দরুন তাহার প্রতি রোজই শির ধরিত। অত্যাধিক পরিশ্রমের অবশ্য একটা ফল হইল। সে পরীক্ষায় উত্তীর্ণ করিল। কিন্তু সাহস এই যে খণ্ড বিখণ্ড হইল, তাহা আর সংশোধন হইল না। বহু দীর্ঘ রজনিসমূহ সে বিনিময় কর্তন করিত। তখন স্বীয় শরীরের দুর্বাবস্থা শরণ করিয়া অশ্রুনায়ে বক্ষোস্থলধৃত হইত। কবি-রাজের বটীকাগুলি পান ও নানারূপ তরল ঔষধি ভোজন করিয়া তাহার কোন উপকার সাধিল না। কে করিবে তাহার উপকার, নৈশার্গিক নিয়ম লক্ষণ করে যে ?

1932

BENGALI—VERNACULAR

1. Either, Expand the following idea giving reasons—

হিন্দু সভ্যতা রাষ্ট্রীয় ঐক্যের উপরে প্রতিষ্ঠিত নহে। সেই জন্য আমরা স্বাধীন হই বা পরাধীন থাকি, হিন্দু সভ্যতাকে সমাজের ভিতর হইতে পুনরায় সঞ্জীবিত করিয়া তুলিতে পারি এ আশা ভাগ্য করিবার নহে।

Or, Briefly describe the condition of Bengali Literature when Madhusudan began his literary activities.

Or, Clearly state the reasons that are responsible for bringing about the tragedy of কৃষ্ণকান্তের উইল।

2. Estimate the value and defects of যেখনাদ বধ as a work of art.

3. কাব্যের গুণ এই যে, কবির রচনা-শক্তি পাঠকের রচনা শক্তি উজ্জ্বল করিয়া দেয়; তখন স্ব স্ব প্রকৃতি অনুসারে কেহ বা সৌন্দর্য্য, কেহ বা নীতি কেহ বা ভাব সৃজন করিয়া থাকে।

Expand clearly the idea contained in the above passage.

4. Amplify one of the following passages in Bengali :—

(a) জন সাধারণ বলিতে যে প্রকাণ্ড জীবকে বুঝায়, স্বভাবতই তা'র প্রয়োজন প্রবল ও প্রভূত। এই জন্তই প্রয়োজন সাধনের দাম তা'র কাছে অনেক বেশী লীলা'কে যে অবজ্ঞা করে। ক্ষুধার সময় বকুলের চেয়ে বার্তাকুর দাম বেশী হয়। সে জন্তে ক্ষুধাতুরকে দোষ দিই নে, কিন্তু বকুলকে যখন বার্তাকুর পদগ্রহণ করতে ফরমাস আসে, তখন সেই ফরমাসকে দোষ দিই। বিধাতা ক্ষুধাতুরের দেশেও বকুল ফুটিয়েছেন, এতে বকুলের কোনও হাত নেই। তার একটি মাত্র দায়িত্ব আছে এই যে যেখানে বাই ঘটুক তাকে কারো দরকার থাক বা নাই থাক, তাকে বকুল হয়ে উঠতেই হবে—ঝ'রে পড়ে তো পড়বে, মালায় গাঁথা হয় তো তাই সই। এই কথাটাকেই গীতা বলেছেন স্বধর্ম্মে নিধনও শ্রেয়, কিন্তু পরধর্ম্ম ভয়াবহ।

(b) কোন্ থানেতে শেষ আমার

কোন্ থানেতে শেষ,

কোন্ থানেতে থামে আমার

দুঃখ হৃৎকের রেশ ?

ভরা স্রোতের মাঝ থানেতে

কোথায় পাব পার,

অসীম মাঝে সীমা কোথায়

অচিন পারাবার,

কালের যবে হারিয়ে যাবে

মুহূর্ত্ত নিমেষ,

কোন্ থানেতে শেষ আমার

কোন্ থানেতে শেষ ?

(c) গান বলো চিত্র বলো ওস্তাদী প্রথমে নব্ব শিরে—মোগল দরবারে ইষ্ট ইন্ডিয়া কোম্পানীর মতো—তাদের পিছনে থাকে। কিন্তু যেহেতু প্রভুর চেয়ে সেবকের পাগড়ীর রং কড়া, তার তকমার চোখ খাধনী বেশী, এই কারণে তারা ভিতরে উৎসাহ বতই পায় ততই পিছনে ছেড়ে সামনে এসে জমে যায়। যথার্থ আর্ট তখন হার মানে, তার স্বাধীনতা চলে যায়। যথার্থ আর্টের মধ্যে সহজ প্রাণ আছে বলেই তার বুদ্ধি আছে, গতি আছে; কিন্তু যেহেতু কার নৈপুণ্যটা অলঙ্কার, যেহেতু তাতে প্রাণের ধর্ম নেই, তাই তাকে প্রবল হ'তে দিলেই আভরণ হ'য়ে উঠে শৃঙ্খল, তখন সে আর্টের বুদ্ধিকে বন্ধ ক'রে দেয়, তার গতি রোধ করে।

5. Translate into Bengali any one of the following passages :—

(a) I am not the only one who cannot altogether respond to the jubilation felt by a nation when one of its great men attains the age of sixty or seventy or eighty years. On the contrary I find myself in most excellent company—viz., the company of those whose anniversaries are thus celebrated. For of all the people that take part in a jubilee, the jubilant is the least disposed to feel jubilant. His mood is one apart full of melancholy and bitterness. The patient endure it in silence, the defiant save themselves from the threatened oppression by taking to the woods.

(b) If we have to decide which of the two temperaments is nobler—the contemplative or the energetic, there is little question but that the preference must be given to the more vigorous temperament. This I shall prove by three examples, two logical and one zoological. It is open to the strong poet to resign himself to contemplation in his intervals of rest, but it is not so easy for the contemplative poet to jack himself up to a course of continuous energy. If you peep through the bed-room window of the poets who are envied for thrice-blessed serenity, you will find them in the evening of their days, sighing for their unhappy indolence.

6. Form four sentences illustrating the different senses in which “ধরা” is used, explaining the meaning in each case. Explain also the meaning of the Bengali phrase “ছাই কেন্তে ভাসা কুলে” and form a sentence with it.

7. Write an essay in Bengali on one of the following subjects :—

(a) Good poetry—its conditions, essential characteristics, place of the didactic element in it, intuition, expression and implications.

(b) Patriotism—its conditions and essential characteristics; why it is valued, its relation to other duties of life; its course in case of conflict with other duties in private or public life and in the bigger sphere of humanity, patriotism and cosmopolitanism.

(c) Education—its methods, ideals and objects, bad and good education, its relation to general culture, morality and religion.

1933

BENGALI—VERNACULAR

1. “ফুলদল দিয়া, কাটিল কি বিধাতা শামলী তরুণের ?”

Explain fully the significance of the above simile with reference to the context.

2. Answer any *three* of the following :—

(a) Comment on the Bengali style of Madhusudan and discuss whether its hold on our language has passed away or remains as a permanent factor in modern Bengali.

(b) Discuss fully whether Chandrashekhar or Pratap may be regarded as the principal hero of Bankim's *Chandrashekhar*.

(c) Give an account of the last days of Madhusudan mentioning specially the services rendered to him by some of his friends.

(d) Discuss the great moral of life underlying the play of *Sakuntala*, bringing out the humanising influence of misfortune on its principal characters.

3. Explain clearly in Bengali the idea contained in *one* of the following passages :—

(a) সাহিত্যকে দেশকালপাত্রভেদে ছোট করিয়া দেখিলে ঠিকমত দেখাই হইবে না। আমরা যদি এইটে বুঝি যে, সাহিত্যে বিশ্বমানবই আপনাকে প্রকাশ করিতেছে, তবে সাহিত্যের মধ্যে আমাদের যাহা দেখিবার, তাহা দেখিতে পাইব। যেখানে সাহিত্য রচনায় লেখক উপলক্ষ মাত্র না হইয়াছে, সেখানে তাহার লেখা নষ্ট হইয়া গেছে। যেখানে লেখক নিজের ভাবনায় সমগ্র মানুষের ভাব অনুভব করিয়াছে, নিজের লেখায় সমগ্র মানুষের বেদনা প্রকাশ করিয়াছে, সেই-খানেই তাহার লেখা সাহিত্যে জায়গা পাইয়াছে।

(b) জীবনে যত পূজা হ'ল না সারা

জানি হে জানি তাও হয় নি হারা।

যে ফুল না ফুটিতে

ঝরেছে ধরণীতে

যে নদী মরণপথে হারাল ধারা

জানি হে জানি তাও হয় নি হারা

জীবনে আজও বাঁহা
 রয়েছে পিছে,
 জানি হে জানি তাও হয় নি মিছে।
 আমার অনাগত
 আমার অনাহত
 আমার বীণাতারে বাজিছে তারা,
 জানি হে জানি তাও হয় নি হারা।

4. Form *four* sentences in Bengali to illustrate the different meanings of “ভাল” and four sentences to show the use of পরন্তু, পরোক্ষে, বৈধী, and কিংকর্তব্যবিমূঢ়।

5. Translate the following into Bengali :—

The *Brikenhead*, a large troop-ship, with 632 souls on board, was sailing off the coast of South Africa on a clear night in February 1852. As the captain was anxious to shorten the voyage, and as the sea was calm, he kept as near as possible to the shore. Off Cape Danger, the vessel was steaming at the rate of nine miles an hour. Suddenly she struck upon a sunken rock with such force that in a few minutes she was a wreck. The roll of the drum called the soldiers to arms on the upper deck. The call was promptly obeyed, though every man knew that it was his death-summons. There they stood—no man showing fear or restlessness—and the ship was every moment going down, down.

6. Write an essay on **one** of the following subjects :—

(a) The peculiarities in character and customs of the people in any district of Bengal with which you are familiar.

(b) England and India—what they can learn from each other.

(c) “Ideals of womanhood—ancient and modern”—woman’s place in society and domestic life—role of the mother and her influence on her sons and daughters—claim of equality of sexes.

1934

BENGALI—VERNACULAR

1. (a) Summarize briefly the political condition of Bengal as depicted in the story of Chandrasekhar, during the subadarship of Kasim Ali Khan.

(b) Explain with reference to the context :—যদি পরোপকারে স্বর্গ থাকে তবে দ্বীতির অপেক্ষাও তুমি স্বর্গের অধিকারী।

2. Explain any two of the following :—

(a) কেহ যদি তরুণ বৎসরের ফল ও পরিণত বৎসরের ফল, কেহ যদি মর্ত্য ও স্বর্গ একত্র দেখিতে চায় তবে শকুন্তলায় তাহা পাইবে—গেটের এই উক্তিটা আনন্দের অভ্যুত্থি নহে; ইহা রসজ্ঞের বিচার।

(b) শকুন্তলাকে একটা Paradise Lost এবং Paradise Regained বলা যাইতে পারে।

(c) এতদিন মধুর কৃষ্ণ রাজত্ব করিতেছিলেন; বিশ পঁচিশ বৎসর কাল দ্বারীর সাধ্যসাধনা করিয়া তাঁহার স্বপ্নের সাক্ষাৎ লাভ হইত; বঙ্গদর্শন দোত করিয়া তাঁহাকে আমাদের বৃন্দাবনধামে আনিয়া দিল।

3. Reproduce briefly the sketches given by Rabindranath either of Raja Rajendralal Mitra or of Bankim Chandra Chatterji.

4. Explain fully with reference to the context any two of the following :—

(a) কি ছার ইহার কাছে, হে দানবপতি

ময়, মণিময়সভা, ইন্দ্রগ্রন্থে যাহা

স্বহস্তে গড়িয়া তুমি তুমিতে পাওবে?

(b) পড়িয়াছে বীরবাহু বীরচূড়ামণি

চাপি রিপুচর বলী, পড়েছিল যথা

হিড়িম্বার স্নেহনীড়ে পালিত গরুড়

ঘটোৎকচ, যবে কর্মকালপৃষ্ঠধারী

এড়িলা একারী বাণ রক্ষিতে কোঁরবে।

(c) কহিও, যেখানে তাঁর রাজ পা দুখানি

রাখিতেন শশিমুখী বসি পদ্মাসনে,

সেখানে কোটে এ ফুল, যে অবধি তিনি

অঁধারি জলধিগুহ গিয়াছেন গুহে।

(d) দেখে হে চাহিয়া

উপলিছে চারিদিকে মহাকোলাহলে

হলাহলসহ সিদ্ধ। নীলকণ্ঠ বধা

(নিস্তারিণী মনোহর) নিস্তারিলা হবে,

নিস্তার এ বলে, সখে, তোমারি রক্ষিত ।

5. Amplify the idea contained in any *one* of the following :—

(a) নদীর এপার কহে ছাড়িয়া নিঃখাস,

ওপারেতে সর্বস্বত্ব আমার বিবাস ;

নদীর ওপার বসি দীর্ঘবাস ছাড়ে

কহে বাহা কিছু স্বত্ব সকলি ওপারে ।

(b) তোরে সবে নিন্দা করে গুণহীন ফুল,

গুনিয়া নীরবে হাসি কহিল শিমূল,

যতক্ষণ নিন্দা করে আমি চুপে চুপে

ফুটে উঠি আপনার পরিপূর্ণ রূপে ।

(c) পোঁচা রাষ্ট্র করি দেয় পেলে কোন ছুতা.

জান না আমার সঙ্গে সূর্য্যের শক্তি ?

6. Translate the following passage into Bengali :—

Hearing that the earth had swallowed up Devadatta, he feared a like fate for himself. And such was the frenzy of his terror that he reckoned not of his kingdom's welfare, slept not upon his bed, but ranged abroad quaking in every limb, like a young elephant in an agony of pain. In fancy he saw the earth yawning for him, and the flames of hell darting forth ; he could see himself fastened down on a bed of burning metal with iron lances being thrust into his body. Like a wounded cock, not for one instant was he at peace. The desire came on him to see the all-wise Buddha, to be reconciled to him, and to ask guidance of him ; but because of the magnitude of his transgressions, he shrank from coming into the Buddha's presence. When the Karttika festival came round, and by night Rajagriha was illuminated and adorned like a city of the gods, the king, as he sat on high upon a throne of gold, saw Jivaka sitting near ; and the idea flashed across his mind to go with him to the Buddha.

7. Write an essay in Bengali on *one* of the following subjects :—

(a) The evils of your society and the means of removing them.

(b) The influence of the Ramayana and the Mahabharata on the character of Hindus.

(c) He prayeth best who loveth best
All things both great and small ;

For the dear God, who loveth us,
He made and loveth all.

1935

BENGALI—VERNACULAR

1. **Either**, Give an idea of Tantriks and Tantrikism as this may be formed from Bankimchandra's sketch of the Kapalika.

Or, Write a brief essay on the character of Kapalakundala.

2. **Either**, Narrate briefly the circumstances which led to the overthrow of the principality of Kapilavastu by the king of Kosala.

Or, Compare as briefly as you can the story of Kamsa and of Vasudeva as given in the Ghata Jataka, with what is said of them in the Srimad-Bhagavata.

3. Explain fully any two of the following.—

(a) আমাদের হিন্দুসভ্যতার মূলে সমাজ ; যুরোপীয় সভ্যতার মূলে রাষ্ট্রনীতি ।

(b) সেই যে অবস্খীতে গ্রামবুদ্ধেরা উদয়ন ও বাসবদত্তার গল্প বলিত, তাহারাই বা কোথায় ?

(c) সূত্রের চেয়ে ভাষা যেমন অনেক বেশী হয়, তেমনি তাঁহার উৎসাহের তুমুল হাত-নাড়া তাঁহার ক্ষীণকণ্ঠকে বহুদূরে ছাড়াইয়া গেল ।

(a) সাজিলা রথীন্দ্রবর্ষ বীর আভরণে
হৈমবতীস্থত যথা নাশিতে তারকে
মহাস্থর ; কিংবা যথা বৃহন্নলাঙ্গপী
কিরীটী, বিরাটপুত্রসহ, উদ্ধারিতে
গোধন. সাজিলা শূর শমীবৃক্ষমূলে ।

(b) যথা সিংহ সহসা আক্রমে
গজরাজে. পুরি বন ভীষণ গর্জনে,
গ্রাসিলা দাসেরে আসি রোষে বিভাবহু—
বাসস্থার, ভবেধরি ভবেধর-ভালে ।

(c) অশ্রু আঁখি বিধুমুখী জমে ফুলবনে
কভু. ব্রজকুঞ্জ-বনে, হায় রে যেমনি
ব্রজবাল! নাহি হেরি কদম্বের মূলে
পীতধড়া পীতাম্বরে, অথরে মুরলী ।

5. Expound the idea in one of the following :—

(a) অমঙ্গলকে লোপ কর, মঙ্গলকে ধরিয়া রাখা অসাধ্য হইবে, মঙ্গল সঙ্গে সঙ্গে লোপ পাইবে। অমঙ্গলের পার্থে থাকিয়াই মঙ্গল মঙ্গল; নতুবা মঙ্গল অর্থশূন্য বাতুলের প্রলাপ।

(b) ধন বল, দলবন্ধন বল, বাণিজ্য বল, আর রাজনৈতিক স্বাধীনতা বল, সকল গিয়াও সমাজ বাঁচিয়া থাকিতে পারে; কিন্তু যে সকল লোকের ধর্ম ও ভাষা গিয়াছে, সে সকল লোকের স্বতন্ত্র সমাজ আছে, এ কথা বলা যায় না।

9. Translate into Bengali :—

Hospitality is a virtue for which the natives of the East in general are highly and deservedly admired; and the people of Egypt are well entitled to commendation on this account. A word which signifies literally 'a person on a journey' ('musafir') is the term most commonly employed in this country in the sense of a visitor or guest. There are very few persons here who would think of sitting down to a meal, if there were a stranger in the house, without inviting him to partake of it, unless the latter was a menial; in which case, he would be invited to eat with the servants. It would be considered a shameful violation of good manners if one abstained from ordering the table to be prepared at the usual hour because a visitor happened to be present. Persons of the middle classes in this country if living in a retired situation, sometimes take their supper before the door of their house, and invite every traveller of respectable appearance to eat with them.

7. Write an essay on one of the following :—

(a) Joint Family System. What it is—is it strictly a joint family when the members mess together and live in the same house but have each a purse of his own?—the advantages and disadvantages of a joint family—The conditions that are steadily undermining it—the remedies you suggest

(b) Village life in Bengal—picture of an ideal village—the causes of the present degeneracy—the extent to which improvements can be effected.

(c) জগতের ইতিহাসে মানুষের পরমপূজ্যগণ দুঃখেরই অবতার।

Examples from History in support of your observations.

8. Rewrite the following after correction, if necessary :—

(a) পাটনায় প্রায় দুইশত ইংরাজ বণিকদিগের হত্যা সমরসর চরিত্রের উজ্জ্বল কলঙ্ক।

(b) তোমরা গুনিয়া আশ্চর্য্য হইবে যে, এশ্বিনো রমণীরা বিড়ালের স্মার জিত্ত দ্বারা চাটিয়া সন্তানের শরীর পরিকৃত করে।

- (c) সহস্র সহস্র মহাত্মাগণ স্বদেশের স্বজলসাধনার্থ সমরসাগরে প্রাণ আহুতি দিয়াছেন।
 (d) যে রেখা সপ্তর্ষিমণ্ডলের দুইটি নক্ষত্রকে সংযুক্ত করিয়া উপরদিকে বঙ্কিত হইলে
 অতিদূরে আর একটা উজ্জ্বল নক্ষত্র স্পর্শ করে বলিয়া বোধ হয়, সেই নক্ষত্রটার নাম ধ্রুব।

1936

BENGALI—VERNACULAR

1. Fully explain the views of Rabindranath in support of his two conclusions :—

- (a) “দেখা গেল কুমারসম্ভব এবং শকুন্তলার কার্যের বিষয় এক।”
 (b) “রামায়ণের বিশেষত্ব এই যে তাহা ঘরের কথাকেই খুব বড় করিয়া দেখাইয়াছে।”

2. Either, (a) Discuss the importance of the Jataka stories in the literature of the ancient religious legends of India.

Or, (b) Briefly narrate the story of কণ্ব দীপায়ন-জাতক and deduce its moral from the Buddhist point of view.

3. Compare the character of Kapal-Kundala with that of Kalidas's *Sakuntala* and Shakespeare's *Miranda*, in so far as all of them lived isolated from society and were brought up under peculiar circumstances.

4. Explain with reference to the context (a) and either (b) or (c) :—

- (a) পড়িয়াছে বীরবাহু বীর চূড়ামণি,
 চাপি রিপুচর বলী, পড়েছিল যথা
 হিড়িম্বার স্নেহ-নীড়ে পালিত গরুড়
 ঘটোৎকচ, যবে কর্ণ, কালপৃষ্ঠধারী
 এড়িলা একাঙ্গী বাণ রক্ষিতে কোরবে।
- (b) চারি দিকে শোভিল কাকন—
 সোধ কিরীটিনী লঙ্কা মনোহরা পুরী !—
 হেম হৃদ্যা সারি সারি পুষ্পবন মাঝে ;
 কমল-আলয় সরঃ।
- (c) কিন্তু ভেবে দেখ বীর, যে বিদ্যুৎ ছটা
 রমে অঁগি, মরে নর তাহার পরশে।

5. Expound the ideas in the following :—

- (a) কেরোসিন শিখা বলে মাটির ঐকীপে
ভাই বলি ডাক যদি দিব গলা টিপে ।
হেন কালে গগনেতে উঠিলেন চাঁদা
কেরোসিন-শিখা বলে এস মোর দাদা ।
- (c) পৌঁচা রাষ্ট্র করে দেয় পেলে কোন ছুতা
জান না আমার সঙ্গে সূর্যের শত্রুতা ।

6. Re-write the following after correction :—

সে ক্রমাগতঃ লেখিয়া বাইতেছে, পত্রে পত্রে শত শত বর্ষ শুদ্ধি ঘটতেছে, তথাপিও সে এত অনাবধান যে তৎপ্রতি তাহার দৃষ্টি নাই। তাহার মাতা-নিতান্ত দুঃখবস্থা ও অনাটনের মধ্যে পুত্রদের ব্যয় নির্বাহ করিয়াছেন, কিন্তু তাঁহার দুঃখদৃষ্টবশতঃ এতগুলি পুত্রদের মধ্যে একটিও মানুষ হইল না। এই অবস্থায় তাঁহার সমস্ত আশা-ভরসা আকাশ-কুসুমের মত নিবিয়া গেল।

7. Combine the following short sentences into one sentence :—

- (a) সেই রজনী শুভ্র জ্যোৎস্না-প্রাবৃত ছিল ।
(b) উহা রজনী-গন্ধা, চম্পক, পারুল এবং কুল্ল কুসুমের ভূষিত ছিল ।
(c) উহা বহু স্নেহ-সমাগমে মুখরিত ছিল ।
(d) সেই রজনী আমাদের স্মৃতিপথে চিরদিন বিরাজিত থাকার যোগ্য ।

8. Translate into Bengali any one of the following :—

(a) Bankim Chandra took Bengali readers by surprise by revealing to them the romance of life and the hidden treasures of emotional joy with which, it is said, they had not previously been familiar. The classical poem of Bengal being mostly translations or adaptations from Sanskrit, and written in the stereotyped form approved by the canons of Sanskrit Poetics, often lack in freshness and animation. Bankim drew his romantic ideas from the British Lake-Poets and other western writers. It cannot, however, be said that such romance was altogether unknown in Bengal before his time. The Vaisnava poems had an exuberance of it in the sixteenth and seventeenth centuries, though they were often mystical and their beauty was concealed from lay readers in the symbols of allegory.

(b) The wife may claim maintenance from the husband, if she find it difficult to live with him. But the old and helpless father or

mother has no such claim on the child's help. If they die of want, the law does not give them the right of suing for maintenance. It is therefore all the more binding on a son and daughter from a moral point of view to repay by gratitude the immense debt they owe to those from whom they derived their life. The parents may be bad or indifferent, one may find a hundred flaws in their conduct; but that cannot be a reason for a son to deny or disown his sacred responsibility. For however wicked one's parents might be they have preserved the child with a care which could not be expected from the greatest benefactor in the world.

9. Write an essay in Bengali on any **one** of the following subjects :—

(a) The Aeroplane—its invention and gradual improvement; how far it is now fit for work as a conveyance to carry mail, passengers, and war materials; what countries have excelled in building them; some of the terrible accidents which have happened in recent years.

(b) Social orthodoxy and superstition in India; how far they have hindered our progress—Gandhi's plan to remove and remedy them—how far applicable in Bengal.

(c) Is religion going to be a dead letter in the modern scientific world?

1937

BENGALI—VERNACULAR.

Candidates are required to give their answers in their own words as far as practicable.

I Either, Explain the following passage with reference to the context, and show what light it throws on the character of Kapāl-Kundala :—

“ভিক্ষুক ক্রণেক বিহ্বল হইয়া রহিল। ভিক্ষকের বিহ্বল ভাব কণিক মাত্র। তখনই এদিক্ ওদিক্ চাহিয়া উদ্ধ্বাসে পলায়ন করিল। কপালকুণ্ডলা ভাবিলেন “ভিক্ষুক দৌড়িল কেন?”

Or, ‘নবকুমার স্তূপারোহণ করিতে লাগিলেন। তখন কিঞ্চিৎ শঙ্কা হইতে লাগিল, তথাপি অকম্পিত পদে স্তূপারোহণ করিতে লাগিলেন। আসীন ব্যক্তির সম্মুখবর্তী হইয়া বাহা দেখিলেন, তাহাতে তাঁহার রোমাঞ্চ হইল।’

Describe what Navakumar saw, as indicated in the above lines.

2. Either, Explain the following extract, unfolding the allusion contained in it :—

“—হে ভারতের শিরঃ চূড়ামণি
তব অনুগামী দাস, রাজেন্দ্র—সঙ্গমে
দীন যথা যায় দূর তীর্থ-দরশনে ।
তব পদ চিহ্ন ধ্যান করি দিবা নিশি,
পশিয়াছে কত যাত্রী যশের মন্দিরে
দমনিয়া ভবদম দুরন্ত শমনে
অমর ! শ্রীভর্তৃহরি, স্বরী ভবভূতি
শ্রীকণ্ঠ, ভারতে প্যাত বরপুত্র যিনি
ভারতীর, কালিদাস—হুমধুর ভাষী ;
মুরারি, মুরলীধনি—সদৃশ মুরারী
মনোহর ; কোস্তিবাস কুস্তিবাস কবি,
এ বঙ্গের অলঙ্কার !”

Or, Explain with reference to the context :—

(a) “ক্ষুদ্র স্থখে ভরে নাক ক্ষত্রিয়ের ক্ষুধা
ক্লেশপতি,—দাঁপুজালা অগ্নি ঢালা স্থধা
জয়রস—ঈর্ষাসিক্স মন্থন সঞ্জাত
সদা করিয়াছি পান, স্থখী নহি, ভাত
সদা আমি জয়ী ।”

(b) “নিলারে রসনা হতে দিলে নির্কাসন
নিম্নমুখে অন্তরের গুচ অন্ধকারে
গভীর জটিল মূল হৃদয়ে প্রসারে ।”

3. Either, Describe some of the cases in which Mahoushadha showed his wonderful power of judgment as related in the *Mahau-magga Jatak*.

Or, Show how Mahoushadha selected his bride Amara.

4. Give the substance of Asutosh's speech on—

either, “ভারতীয় সাহিত্যের ভবিষ্যৎ”

or, “মাইকেল মধুসূদন দত্ত” ।

- 5. Expand the idea in the following :—

“বাবুই পাখীকে ডাকি কহিছে চড়াই—

‘কুঁড়ে ঘরে থেকে কর শিল্পের বড়াই।

আমি থাকি মহান্থে অটালিকা’ পরে

তুমি কত কষ্ট পাও রোদ, বৃষ্টি, ঝড়ে।’

বাবুই হাসিয়া কহে ‘সম্মেহ কি তায় ;

কষ্ট পাই তবু থাকি নিজের বাসায়।

পাকা হোক, তবু ভাই পরের ও বাসা

নিজ হাতে গড়া মোর কুঁড়ে ঘর খাসা।’

6. Correct the mistakes in the following passage :—

একদা অমাবস্তা রাত্রে বহু দম্যগণ ভাগিরথী-তীরে যাইয়া এক ধনী ব্যক্তির নৌকা প্রদর্শন করিল। তাহারা ছোট একখানি ডিকীতে চড়িয়া ধীর কুঞ্জরের দ্রুত-গতিতে সেই নৌকাটার উপরে আসিয়া পড়িল। নৌকা-যাত্রী সশঙ্কিত হইয়া সামান্য পূর্বক বলিলেন, “হোমরা যদি কিছু অর্থ লইয়া আমাদিগকে ছাড়িয়া দাও, তবে আমি দিতে প্রস্তুত আছি।” দম্যর পরিষ্কার ভাবে বলিল :—“আমরা ছাড়ি না। নৌকা লুণ্ঠন করিব।”

7. Translate into Bengali the following passage :—

By the time they had reached this final stage of their erroneous course, all possibility of escape must have been long over for both alike. Their exhaustion must have been excessive, before they could have reached a point so remote and high. Unfortunately, the direct result of all this exhaustion had been to throw them further off from their home, or from any dwelling place of man. Here, therefore, at this pinnacle hope was extinct for the wedded couple, but not perhaps for the husband.

8. Write an essay in Bengali on one of the following subjects :—

- (a) Bengal a hundred years hence.
- (b) Modern Bengali poetry.
- (c) Village reconstruction.
- (d) The Abyssinian War and its lessons.

Calcutta University

B. A. PAPERS

1909

ECONOMICS—PASS

First Paper—Political Economy

Paper setters { Monohar Lall Esq. M. A.,
Dr. J. V. Ryan, B. A. LL. D.,
Principal J. N. Das Gupta, Esq. B. A.,

Attempt any eight of the following questions.

All the questions carry equal marks.

1. Trace the development of the present system of 'Poor Law' administration in England. What were the principles established by the Elizabethan Act of 1601, and how far have these been adhered to or departed from in modern times ?

2. Explain the provision of the Bank Charter Act of 1844 and indicate the circumstances which led to the passing of the act. Examine arguments for and against its repeal.

3. Discuss the respective views of Prof. Caird and of J. S. Mill regarding the scope and method of economic enquiry in the light of (a) Walker's, and (b) Gide's remarks on the subject.

4. What are Comte's reasons for denying to Political Economy the character of a science ? How far are those objections valid ? State concisely and examine critically the doctrines of the Liberal school of Economists.

5. Remark on the characteristic merits of Peasant proprietorship. Would you advocate the compulsory introduction of the system in a country like England ? Give reasons for your answer.

6. Account for the rise and explain the function of the Entrepreneur class in the modern industrial world.

7. Trace (a) the evolution of ideas regarding the productivity of labour, (b) the successive stages of industrial evolution.

8. State and comment on the economic theory known as Gresham's Law.

9. Explain Walker's theory of value. What is the economic signification of competition, and why does Walker consider it to be

the most important word in the theory of value? Discuss in this connection the two following propositions :—

- (a) Labour is the cause of value.
- (b) Utility is the cause of value.

10. Discuss the arguments which are commonly adduced (a) in justification, (b) in condemnation of the present system of distribution of wealth.

11. Expound 'the residual claimant theory' of wages as put forth by Walker, and summarize Gide's comments on the theory.

12. Discuss (a) Rent is not an element in the price of agricultural produce, (b) Profits do not form a part of the price of manufactured products.

13. "This has been the object of protectionism for many years—an object which it seeks to attain by means of elaborate tactics based on the following consideration." What is the object; and what are the considerations here specified?

14. What is meant by the economic harmonies and how is the doctrine affected by the principle of the degradation of labour?

15. What does Walker consider to be the ideal tax and what is meant by the purely economic theory of taxation?

ECONOMICS—PASS

Second Paper—Political Philosophy

GROUP A

Only three questions to be answered

1. What is the modern theory of the evolution of the State?
2. Discuss the advantages and disadvantages of government by assembly illustrating your answers by historical precedents.
3. Discuss the advantages and disadvantages of an aristocratic form of government and notice any points of contrast between the English and the ancient aristocracies.
4. Give an outline of the policy advocated by Adam Smith and his disciples and mention the results which have accrued in England by its adoption in modern time.

GROUP B

Only four questions to be answered

5. Give a brief account of the causes which have led to the diffusion of Roman law in the legal systems of the continent and to its absence in the English system.

6. Write a short account of the origin and development of the English Cabinet, and notice any anomaly which it presents.

7. Note the points of contrast between ancient and modern democracies.

8. What are the sources of law ? Illustrate their operation.

9. Write a short note on the Feudal system and its defects.

GROUP C

Only three questions to be answered.

10. Notice the chief points of contrast between the English and Continental nobility.

11. What are the attributes of national sovereignty ?

12. 'The scientific study of the state may be undertaken from different points of view and in different ways. There are two sound methods of scientific enquiry and two false methods.' Explain.

13. Mention and discuss briefly the various objections which from time to time, have been taken to the extension of the franchise.

ECONOMICS—PASS

Third Paper—Indian Economics

Questions 9 and 12 and any other six but not more to be done.

1. Write explanatory notes on—Tkkavi, Abwab, Jamabandi, lakhiraj lands and 'the Saharanpur rules'

2. Describe briefly the more important land revenue systems of British India.

3. What are the peculiarities of the foreign trade of this country ? Account for the permanent excess of exports over imports and indicate the effects of this necessity of increased exports on India's currency policy.

4. What are 'Home Charges' ? Briefly describe the method by which payments are made by this country to England.

5. Explain the character of Indian famines, and estimate their causes. What are, in your opinion, the most effective remedies to meet this calamity ?

6. Give briefly the chief physical features of India, indicating their effects on the industries of the land.

7. Describe briefly the various systems of irrigation in use in different parts of the country.

8. Analyse the sources of Indian revenue, and write a full note on the revenue from opium.

9. Write a critical note on the nature of land revenue in India. What do you know of the controversy regarding land revenue as being of the nature of a 'tax' or rent ?

10. Write notes on—The cotton Excise duty : the salt Tax : the Famine Insurance Fund ; the so called 'limping bimetallism' prevailing now in this country ; and co-operative credit societies.

11. State the so called 'infant industry argument' for protection. Is such protection necessary for the India of to-day ? Would you favour the inclusion of India in a system of interimperial preferential duties ?

12. State concisely some of the chief obstacles in the way of India's economic progress. What are the country's requirements for an efficient manufacturing growth, and what are the special needs for agricultural development ?

1910

ECONOMICS—PASS

First Paper—Political Economy

1. What is meant by an Economic Law ? Are we justified in saying that Economic Laws are analogous to Laws of Nature ? Discuss the position of Economics among the special sciences.

2. What are the pre-requisites for the free circulation of labour and capital in a country ? How far are these requisites present or operative in modern India ?

3. Indicate the general drift of the criticism of the present industrial system by Socialistic writers, and discuss the probable advantages and disadvantages of any one of the schemes advocated by contemporary socialism.

4. Say what you know of the Mercantile System, and remark on the policy of International trade which it gave rise to.

5. Explain Bimetallism and Monometallism, and discuss the arguments which are ordinarily urged for and against each system.

6. Distinguish between market price and normal price, and the causes which prevent the ready adjustment of the one to the other.

7. Trace the origin of Trade's Unions. Is there any necessary connexion between these Unions and strikes? Explain the natures of any change which may be noticeable in the aims and objects of Trades Unions in recent years.

8. Is there any essential distinction between direct and indirect taxes? Discuss the arguments for and against each system of taxation. Would you advocate the imposition of a graduated income tax in a country like India? Give reasons for your answer.

9. Write explanatory and critical notes on any two of the following :—

- (a) The young industry argument.
- (b) Malthu's doctrine of population.
- (b) The Ricardian theory of rent.

ECONOMICS—PASS

Second Paper—Political Philosophy

Examiner—W. C. WORDSWORTH, ESQ., M. A.

GROUP A

1. Account for the preservation and subsequent diffusion throughout Europe of the principles of Roman law.

2. Give a short account of the composition and functions of the German Reichstag.

3. Describe the various ways in which the people of Switzerland exercise a direct part in legislation.

4. What modern department have been developed from the Great Council of early Norman times? Describe briefly the method of their development.

5. Give a short account of the functions of the German Chancellor, and contrast his position with that of the English Prime Minister.

6. Mention the chief functions of the English Parliament.

Group B

(Only four questions to be answered)

7. What various dates have been assigned for the commencement of the Modern Epoch? What are Bluntschli's ideas on the subject?

8. Give a short account of the achievements and failures of the Greeks in politics.

9. What are the advantages and disadvantages of the Ballot ?
10. What is the Utilitarian Doctrine, and what are its defects ?
11. Distinguish between the terms, People and Nation.
12. What are the ordinary characteristics of theocratic states ?

ECONOMICS—PASS

Third Paper—Indiann Economics

Eight questions to be answered

All questions are of equal value.

1. Write notes on :—the Moghul system, jaigirs, takkavi, the Seharanpur rules and the Raiyatwari village.
2. What do you understand by the settlement of land ? Give in outline the main features of land settlement in India and more particularly of the permanent settlement in Bengal.
3. What do you consider to be the real function of foreign capital in developing the resources of a backward country like India ? Consider the educative influence of foreign capital in this country.
4. What are the Home Charges ? Briefly describe the method by which payments are made by this country to England.
5. Briefly summarize the recent currency legislation in India. Indicate briefly the circumstances that led to it and explain the necessity of artificially maintaining the exchange in India's favour.
6. Write notes on—the Salt Tax, the Co-operative Credit Societies.
7. Arrange in order of their importance the chief industries of India. Give the main features of India's Agricultural problem and other steps taken by the government during the last fifty years to meet some of the evils of our agricultural situation.
8. Write a note on the production and character of coal and iron-ore in India indicating location of mines with special reference to the possibilities of the Bengal Coal Industry.
9. Give a general idea of India's imports and exports and indicate in which direction India should cultivate her exports.
10. State the case for the extensions of (a) railways and (b) irrigation work as means for the prevention of famine. Would you advocate one or the other more particularly at the present stage of their development and why ?

11. State the so called 'infant industry argument' for protection. Is such protection necessary for the India of today? Would you favour the inclusion of India in a system of Inter-imperial preferential duties? Give reasons.

1911

ECONOMICS—PASS

First Paper—Political Economy

1. Discuss the relative advantages and drawbacks of (a) the deductive method, and (b) the inductive method in Economic inquiries. What do you consider to be the proper method of investigation in the social sciences?

2. Give some account of the Wages-fund Theory and of the controversies associated with it.

3. Elucidate the law of Diminishing Returns, and its relation to the doctrine of rent.

4. Examine the industrial effects of the growth of machinery explaining how it has affected the social and economic condition of the working classes.

5. Set forth the respective advantages and disadvantages of free competition and of monopoly.

6. Discuss the arguments, economic as well as non-economic usually urged in favour of a Protectionist policy in our days.

7. A Finance Minister has to raise a certain revenue by taxing commodities. What are the general principles which should guide him in selecting commodities for his purpose?

8. State the arguments for and against Factory Legislating.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. What are your ideas on the subjects of state interference?

2. What are the arguments for and against the grant of the franchise to women?

3. Criticize Aristotle's classification of State.

4. What are the divisions of Political Science, and what branches of study does each embrace?

5. What is the Patriarchal Theory of state evolution: Notice and discuss any objections which have been taken to this theory.

6. Describe the process whereby the Greek and Roman governments were developed from the ancient family states.

7. 'Two unifying influences operated, more or less potently, during the Middle Ages to counteract the disintegrating tendencies of the feudal system'—Amplify and explain this proposition.

8. Write a short note on the Privileges of the Commons.

9. What are principal difficulties in the way of the formation of a Federation of the British Empire?

ECONOMICS—PASS

Third Paper—Indian Economics

1. *Either*, Give a brief account of the various measures adopted by the government to relieve agricultural indebtedness in this country.

Or, Give the chief features of the Co-operative Credit 'Societies' Act of 1904: and discuss the limits of government help in the development of rural co-operative credit.

2. What do you know of the following schemes and measures :—

- (a) Building grain elevators at the port of Karachi ;
- (b) Improvement of Indian cotton ;
- (c) Legislation for our Insurance Companies ;
- (d) Making of Rs. 10 and Rs. 50 notes universal in the country.

3. (a) Locate the following crops, and indicate the climatic and other conditions which favour their growth in the particular localities :—wheat, cotton, jute and rice.

(b) Locate the following mining industries :—coal, iron, manganese, and gold.

4. Estimate the following as remedies against famines :—

- (a) Increased irrigation ; (b) increased transport facilities ;
- (c) increased industrialism.

5. "Public opinion in India is over-whelmingly protectionist" (Less Smith).

State the chief arguments on which protection is advocated for this country ; and attempt a careful examination of Indian Protectionism.

6. You are asked to compare the material prosperity of India to-day with the India, say, of forty years ago. What facts and figures will you require, and to what kind of general observation on the part of travellers will you give special weight ?

7. Write notes on—the opium revenue, the cotton excise duty, the silver duty and our revenue from taxation.

8. The Rupee coinage of India now is to all intents and purposes a token coinage.

The Rupee is for some purposes merely inconvertible money printed on silver.

Carefully explain—

How does the Rupee, though unlimited legal tender, fail to satisfy the full competitions of standard money ?

9. What do you know of the following :—the Punjab Land Alienation Act, the Bengal Tenancy Acts, and the Gold Standard Reserve Fund ?

10. What are the peculiarities of the foreign trade of this country ? Account for the permanent excess of exports over imports and indicate the effects of this necessity of surplus exports on India's currency policy.

1912

ECONOMICS—PASS

First Paper—Political Economy

1. What are the influences which affect the accumulation of wealth in a country ? Illustrate your answer by reference to the case of England in recent years.

2. Explain and examine (a) the Malthusian doctrine of population and (b) the Ricardian theory of rent.

3. What are the circumstances which favour localization of industries, and what are the advantages which result from it ?

Define a market, and indicate the characteristics of commodities for which there is a wide market.

4. Give an account of the functions of the modern employer, and of the services rendered by skilful business management.

5. What are the considerations which should have weight with a finance minister in determining (a) the issue, (b) the payment of a public debt ?

6. Discuss some of the cases where limitations on the freedom of trade may be desirable.

7. Explain fully and accurately—(a) balance of trade, (b) progressive taxation, (c) profit sharing. (d) commercial crisis.

8. Discuss the following proposition :—

The value of money, like the value of anything else, is purely a question of demand and supply.

9. Examine the economic influences of strikes, with special reference to their effect on wages.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. What are the common characteristics of all States ?
2. What objections have been urged against the possibility of a Universal State, and How does Bluntschli answer these ?
3. What are the causes which have contributed to the survival of the English Nobility as a National institution.
4. "The citizenship of the town gave birth to the modern citizenship of the State." Explain and illustrate this.
5. How was the principle of slavery defended by the Greeks, the Romans, and the Teutons ? What are the generally recognised principles of modern States as regards slavery.
6. What were the causes which contributed to the diffusion of Roman law in Europe after the dismemberment of the Roman Empire ?
7. Give a brief account of the origin and development of the English Cabinet.
8. What are the sources of law ? Distinguish between law and Ethics. Illustrate the Statement—"There is a common legal conscience in mankind."
9. Give an account of the obsolete and existing judicial functions of the House of Lords.
10. Give the principal landmarks in the growth of supremacy of the House of Commons.
11. Describe the constitution and functions of the two Committees of the Privy Council.
12. What are the defects of the present representative system in England and what remedies have been proposed ?

ECONOMICS—PASS**Third Paper—Indian Economics**

1. *Either*, Briefly summarize the currency legislation of 1893 and 1899 in India. Indicate the circumstances that led to it, and explain the necessity of artificially maintaining the exchange in India's favour.

Or,

'The rupee coinage of India now is to all intents and purposes a token coinage.'

'The rupee is for some purposes merely inconvertible money printed on silver'.

Carefully explain the above statements. How does the rupee though unlimited legal tender, fail to satisfy the full conditions of standard money ?

2. What are 'Home charges'? Briefly describe the method by which payments are made by this country to England.

3. Give some account of India's public debts.

4. Discuss the principle of co-operative credit for agricultural communities and indicate in what directions and why it is now sought to amend the law relating to-operative Credit Societies in India ?

5. Estimate the following as remedies against famines :—

- (a) Increased irrigation ;
- (b) Increased transport facilities ;
- (c) Increased industrialism.

6. What are the peculiarities of the foreign trade of this country ? Account for the permanent excess of export over imports, and indicate the effects of this necessity of surplus exports on Indian's currency policy.

7. Write notes on :—the Saharanpur Rules ; the Punjab Land Alienation Act ; the Railway Guarantee system : the Rent Act of 1859, and the takkavi loans.

8. Characterize briefly the economic transition in India.

9. Examine, with reference to India, the soundness of the following protectionist arguments :—

(a) The infant industry argument : (b) the diversification of industry argument.

10. Give an account of the economic geography of the Indo-gangetic plains.

ECONOMICS—PASS**First Paper—Political Economy**

1. Describe the main features of present-day economic societies.
2. Critically attempt a full definition of wealth. How would you estimate a nation's wealth.
3. Write critical notes on (a) the policy of making work (b) over capitalization and its evil, (c) the concept of consumer's surplus, (d) expenditure versus investment as helps to industry.
4. Critically estimate the more important of the theories of value.
5. Write explanatory notes on—(a) The Central Bank system ; (b) the economic effects of change in the value of money.
6. What is meant by saying that wages tend to equal the marginal product of labour ? Can you explain interest and profits in a similar way ? Does such an explanation furnish any complete ethical justification of the present economic order ?
7. Consider the various principles of attaining justice in taxation. How far is progression in taxation possible, and how would you justify it ?
8. Consider some of the more important plans to secure settlement of differences between capital and labour.
9. Consider generally the proper sphere of state action in regard to a country's industrial life.
10. Discuss the effect upon agricultural rents—(a) of agricultural improvements, (b) of improvements in internal means of communications, (c) of opening up of a new source of supply of agricultural products.

ECONOMICS—PASS**Second Paper—Political Philosophy**

1. Discuss some of the more important theories concerning the origin of the state and give a brief resume of the arguments which may be urged for and against each of the theories you discuss.
2. Specify some of the more important functions of government. On what grounds are we justified in regarding Education as one of the proper offices of the state ? Is any difference noticeable between the attitude of ancient governments, and that of modern

governments of the constitutional type, in regard to this question of governmental functions ?

3. Elucidate the present British colonial policy, and explain the difference in the relation of England to Calcutta and to Ceylon.

4. Write a note on the constitutional position of the president of the French Republic, his powers and his functions. What is an interpellation as distinguished from a question and what is its mode of operation ?

5. Discuss the general characteristics of theocratic states illustrating your answer by reference to theocracy as it obtained among the Jews and the Persians.

6. Write a short note on socialism old and new and indicate what you may regard as the socialistic tendencies of modern European Governments.

7. What is meant by party ? Discuss the merits of the two party system and explain how party organisation is maintained in the modern English world.

8. Say what you know of the theory of the separation of powers, and examine its influence on practical politics in France and in America.

ECONOMICS—PASS

Third Paper—Indian Economics

1. Name the principal agricultural and mineral products of India, giving approximately the value of exports of five former and two of the latter. What are the countries of their importation ?

2. What is the necessity of importing coal into India which produces it in sufficient quantities to satisfy all home requirements ?

State briefly the arguments against the proposal to withdraw the redundant silver currency with a view to establish stability of exchange between gold and silver. How is a stable exchange said to attract British capital to India ?

3. State briefly the arguments for and against the Permanent Settlement.

And any three of the following five questions.

4. What are the defects and difficulties of Indian Agriculture ? What special measures have been taken or are yet necessary, for its improvement ?

5. Describe the different measures adopted for the production and improvement of Indian forests. What is their economic value in times of famine ?

6. Describe the principal causes that have affected wages in Bengal. Enumerate the probable causes of the recent rise in prices.

7. What do the Home charges consist of? How much of them represent interest on capital invested in India? Do the Secretary of State's drawings exactly correspond with the net export of Indian's merchandise and treasure?

8. Define a Zemindari' and 'ryotwari' settlement. Define also 'net asset'? What are the values and essentials of the cadastral Record?

1914

ECONOMICS—PASS

First Paper—Political Economy

1. "When we grant to any branch of human knowledge the name of science' our object is not the simple bestowal of an honorary title; we mean that the facts that it deals with are connected by certain necessary relations which have been discovered, and which are called laws'.

State whether you consider that Economics can be called a science according to the above definition, and give reasons for your answer.

2. State the law of Demand. Upon what experience is it based? Show how demand may be represented diagrammatically. Explain the elasticity of demand, and show how it may be measured.

3. 'Value is determined by cost of Production'. Value is determined by Marginal Utility.'

Discuss carefully the validity of these statements.

4. Explain the special theory of value applicable to commodities subject to (a) composite demand; (b) joint supply; (c) monopoly.

5. What is the object of an index number? How would you construct an index number of prices to show the change in prices in Calcutta during the last fifteen years. To what points would you direct special attention.

6. In estimating the relative prosperity of the workers of different countries, is it sufficient to compare money wages?

7. Mention the chief causes which give rise to movement of gold from one country to another. By what means is the transfer of bullion from country to country prevented in a large degree?

8. 'That an increase of the quantity of money raises price and a diminution lowers them is the most elementary proposition in the theory of currency, and without it we should have no key to any of the others.'

Examine this statement with special reference to Indian conditions, and show how the theory is true only in 'simple and primitive state of thing'.

9. What do you understand by equality of taxation ?

Give the general arguments for and against progressive taxation.

10. Explain four of the following :—

Consumer's surplus ;

Quasi Rent ;

Favourable rate of exchange ;

Specie point ;

Gold exchange standard.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. Give an account of the origin and development of the Cabinet system in England.

2. Enumerate the functions of the Lord Chancellor of England and contrast them with those of the German Chancellor.

3. Compare and contrast the process of constitutional development in England and America.

4. Compare and contrast the political methods of Rome and England.

5. What are the defects in the present electoral system in England ? Suggest any remedies.

6. What are the existing privileges of Members of Parliament ?

7. What are Bluntschli's ideas regarding the possibility of a Universal State ?

8. Trace briefly the history of the development of the idea of the State from ancient to modern times.

9. Give a brief history of the rise of the citizen class in Europe.

10. Point out the most marked contrasts between the Ancient and Modern States.

11. What are the various methods, which have been suggested, of classifying States ?

12. What are the advantages of a bicameral system of legislature ?

ECONOMICS—PASS**Third Paper—Indian Economics**

1. Analyse Home Charges, and explain how they are met through the operations of trade and commerce.
2. Explain the general principles of 'Co-operative Credit Societies.' In what manner can co-operative associations influence beneficially the village government of your province.
3. "The rate of exchange is kept from falling by the combined effect of the closing of the Mints to the free coinage of silver and the balance of trade in favour of India." Explain fully this statement.

And any two of the following four questions.

4. Write a note on the Chenab Canal Colony, with special reference to the effect of the canal on the trade and agriculture of the Punjab.
5. Describe the present position of the hand-loom industry. To what extent and under what conditions can it be compared with powerloom industry?
6. What are the different classes of irrigation works in India?
7. What are the principal articles in which India deals with (a) Germany, (b) Belgium, (c) Austria Hungary, (d) Japan, (e) Java, (f) Mauritius, and (g) the United States? To what countries are Indian rice and wheat exported? What is the approximate annual quantity of export of each?

1915

ECONOMICS—PASS**First Paper—Political Economy**

1. Explain the reasoning upon which the proposition 'Cost of production determines value' rests. What criticisms can be made of this statement?
2. What are the general conditions under which a Handicraft system of industry will give place to a Factory system? Compare the relative advantages of the two systems.
3. Explain the meaning of "Elasticity of Demand, and show its importance in theoretical and practical problems. An increase occurs in the supply of rice, gold, tea, toys, and scientific books while the

condition of demand remains unchanged. What will be the general effects upon the price of the respective articles ?

4. Explain the phrases "Standard of life" and "Standard of comfort." Upon what main conditions does the standard of comfort of the working classes in a community depend ? How would you attempt to raise that standard in the case of India ?

5. Explain what an economist means by a Market. Upon what does the existence of a highly organised market depend ? What function in particular does a 'dealer,' or speculator, play in such a market ?

6. Wages have been described as being 'the discounted product of industry.' Bring out the meaning of the phrase and consider whether it is a correct explanation. How would you account for the comparatively low wages paid to women ?

7. Bring out clearly the difference between Rent and Interest. Distinguish between Interest and Profit. What is the probable effect upon the general rate of interest of an increase in the volume of Currency ?

8. Explain the difficulties that beset an attempt to define Money. What is meant by Fiduciary Money, Standard Money, Bank Money ?

Why is a good Currency system so important to the economic prosperity of a country ?

9. Carefully consider whether Labour can raise the level of normal real wages by means of combination.

10. Upon what general principles should a Government determine its tax system ? Why are active duties generally condemned ? What are the advantages and disadvantages of an income tax.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. "Political Science deals with Government" (*Leacock*).

"The science of politics is an experimental science ; and therefore it is, like all other experimental sciences, a progressive science." (*Macaulay*).

Discuss carefully these statements with regard to the scope and method of political science.

2. 'I cannot find that very obvious classification which comes down to us from Aristotle, and which is still assumed and accepted almost on all hands, is at all satisfactory.' (*Seeley*).

3. State and examine Aristotle's classification of the forms of Government.

Discuss and distinguish the various meanings of the term 'right.'

4. State clearly what are the attributes of the sovereign as conceived by Hobbes.

5. 'If the inflexibility of French constitutions has provoked revolutions, the flexibility of English institutions has once at least saved them from violent overthrow.'

Criticise this statement :

6. What are essential features of federal institution ? Examine the statement :

'Federal Government means weak Government.'

7. 'The aim of the prevalent Socialism is to gain possession of political power, with a view to the socialisation of the means of production, distribution, and exchange.'

We may call it a revolution, if we use the word as merely implying a vast and fundamental change in human affairs. It has no necessary connection with force of violence."

Discuss this with special reference to the distinctive features of Socialism.

8. The rule or supremacy of law has been said to form one of the main characteristics of the English Constitution.

Explain this with reference to "Administrative Law."

9. Write a short essay on the importance of Machiavelli's "Prince" in Political Philosophy.

10. Discuss the following definition of International Law : International Law is the aggregate of the rules determining and giving effect of the rights and duties of independent states.

ECONOMICS—PASS

Third Paper—Indian Economics

1. Draw up a rough statement of *debts* and *credits* of India with foreign countries, and explain how they are adjusted. Are there any items on the *debit* side to which you might take exception as constituting a 'drain' on the economic resources of India ?

2. Enumerate the *seven* foundation principles of *Co-operative Credit Societies* in India ; and justify the necessity or appropriateness of each principle with reference to Indian conditions.

3. Discuss the respective facilities and difficulties of setting up and working a cotton mill in India and in England.

4. Analyse the arguments *for* and *against* the introduction of a gold currency into India.

5. Discuss the relative values of Railways and Irrigation works in India as Famine Protective works.

How are the funds for constructing Railways and Irrigation works ordinarily provided ?

6. What are the ordinary limitations on 'Large-Scale Production in agriculture ?

Discuss these limitations with special reference to Large Scale agriculture in *Bengal*.

7. Enumerate the various measures which are taken in relieving the effected population (a) in the early stages of a famine, (b) in the midst of a famine, (c) after a famine is over. Explain the necessity of each stage.

8. Explain clearly what are 'Countervailing duties' on sugar and 'Exercise or Countervailing duties' on cotton goods. State the circumstances under which they were imposed and consider whether they are justifiable.

9. Discuss the relative economic condition of the population in Bengal inhabiting, (a) jute-growing districts, (b) rice-growing districts, (c) mill-towns, i.e. towns in which jute, paper &c., are manufactured.

10. State the principal reasons which induced Lord Cornwallis to introduce the 'Permanent Settlement' into Bengal. Justify or controvert those reasons under present circumstances.

1916

ECONOMICS—PASS

First Paper—Political Economy

1. What do you understand in political economy by Production ? What are the factors of production, and in what manner do they co-operate ?

2. What are the advantages of large-scale production ? What are the limitations to the increase of scale in the case of agriculture and other industries ?

3. What is Capital ? What are the factors affecting the growth of capital in a country ?

4. State the Law of Diminishing Returns. What is the bearing of the law on the theory of population ? Illustrate from Indian conditions.

5. What do you understand by the Value of an article ? How is value determined ? Explain why in some cases value is based on utility alone and give illustrations.

6. What is the meaning of Elasticity of Demand ? Of what articles you expect the demand to be inelastic ? Give illustrations.

7. What are the functions of Money ? What would be the result of an increase or decrease in the quantity of money, and why ?

8. What is the nature of the service performed by the Entrepreneur or the business man, and in what manner is he rewarded ?

9. How do you account for different earnings of labour in different occupations and in different localities ? Why are some of the most unpleasant kinds of labour paid extremely low wages ?

10. Consider fully the direct and indirect economic effects of a duty on the import of motor-cars in India.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. 'Government is based on force.' Examine the truth of this theory.

2. Discuss the origin and justification of the institution of private property.

3. Define exactly what you understand by Sovereignty. How far can Sovereignty properly be said to belong to the people.

4. Trace the main steps in the development of the British Parliament. Or, Trace the changes in the Constitution of Indian Government during the last twenty-five years.

5. Describe carefully the relation between the legislative and the executive in Britain, Germany and the United States.

6. What are the arguments in favour of the Government adopting a Laissez faire policy ? Indicate the reasons which in recent times have led to a considerable departure from this policy.

7. Discuss the advantages and disadvantages of a Free press.

8. Is there such a thing as a natural Right ? If so, what exactly does it imply ?

9. Explain the object of referendum. Examine the objections that have been raised against its introduction into Great Britain.

ECONOMICS—PASS

Third Paper—Indian Economics

* 1. What was the central problem that was considered by the Indian currency Committee of 1893 ? What bearing has the Quantity Theory of Money on the solution of this problem.

2. Consider whether (a) agriculture, (b) large scale manufacturing industries, or (c) small-scale cottage industries are most suitable for India having special regard to her social and industrial conditions.

3. Define the *Khas* and the *Zemindari* systems of land settlement.

Lord Cornwallis discarded the *Khas* system in favour of the *Zemindari* system; while the present-day administrators prefer the former to the latter. Give reasons which have led to its change of policy.

4. Enumerate the principal causes of the recent rise of prices in India. Which of these causes do you consider to be peculiar in India?

It is said that the rise of prices has been generally beneficial to the country. Examine the statement.

5. Explain the general principles of *limited* and *unlimited liability* of partners in business. Consider why the *unlimited liability* is appropriate to the Co-operative Credit Societies.

6. Enumerate the chief causes of agricultural indebtedness in this country. Give a brief account of the measures taken by Government to provide a remedy for each of these causes.

7. Define the following terms :—(a) net assets, (b) net products (d) alienation, (e) rights of pre-emption, and (f) record

Indicate the administrative usefulness of the maintenance of a correct and up-to-date record of rights.

8. Explain the necessity and importance of each of the main grounds on which increase of land revenue at the time of re-settlement is generally permitted. Indicate the various steps in the process of land revenue settlement.

9. Elucidate the general principles on which famine relief is administered in India.

1917

ECONOMICS—PASS

First Paper—Political Economy

1. What is the subject-matter of Economics? Explain in what way it is a social science, and bring out in your answer its relations to other social sciences.

2. What are the factors leading to localization of industry? What are the advantages of such localization? In what industries is localization impossible, and why?

3. What do we understand by a 'market' in economics? What are the limitations with regard to time and space to which markets are subjects?

4. How is the value of an article determined when the production of it is in the hands of an individual or a single corporation? Under what circumstances can a monopoly be an advantage to the community?

5. What do you understand by normal value? Of the factors affecting the demand and the supply of a commodity which are more important with regard to normal value, and why?

6. What is Gresham's Law? How does it work, and in what cases is it applicable?

7. What are the principal considerations which are put forward by protectionists in support of their doctrine?

8. Explain the following:

The rate of wages is determined by marginal productivity of labour.

9. What is luxury? Under what circumstances is luxury justified.

10. Discuss the nature of profits. Are profits 'legalized robbery'? What is the economic justification of profits?

ECONOMICS—PASS

Second Paper—Political Philosophy

1. State and discuss the best modern definition of sovereignty, and explain the difficulties in the way of arriving at an accurate one.

2. What is law? Explain what is meant by 'Common law,' 'International Law,' and 'Natural Law'.

Answer Question 3 and any five of the remainder.

3. Define Aristocracy. Should any class have a privileged position with regard to legislation? If so, how should such a class be selected.

4. Describe an ideal representative system for a modern state.

5. What devices are now in use or can be suggested to expedite Parliamentary business in democratic countries?

6. What is party government? Describe the parties existing in any two or three modern states, and the methods of forming and controlling them.

7. Compare local government in England, France and India.

8. What plans have been tried to increase the influence of voters upon their representatives?

8. Compare Canada, the United States, and Germany as federations.

10. What are the true aims of the State? How can order be reconciled with liberty, and the rights of the State with those of individuals?

ECONOMICS—PASS**Third Paper—Indian Economics**

1. What is the Paper Currency Reserve ? In what form is it kept, and what is the object of keeping it ?

Explain the usefulness of each of its component parts.

Why is it considered advisable to keep a position of the Reserve in London ?

2. India is called a Debtor country on account of her many foreign obligations. What is the nature of these obligations ? Explain the process by which they are discharged.

3. Discuss critically the question whether Famines in India are *famines of food* or *famines of money*.

4. State the disadvantages of large scale agriculture generally. Examine to what extent they hold good in India.

How far is co-operative agriculture possible in Bengal ?

5. The following are among the causes of high prices in India :—

(a) Development of communications and lowering of the transport :

(b) Growth of banking facilities and development of credit.

How in your opinion do these causes operate to raise prices ?

6. Define the following, bringing out clearly the leading ideas in each :—

(a) Cadastral survey.

(b) Record of Rights.

(c) Settlement of Land Revenue.

(d) Redemption of Land Revenue.

(e) Resumption of land grants.

What are the main features of the Permanent Settlement ?

7. Describe the general principle underlying the system of *Patni* tenures in Bengal ; and examine their social and economic effects.

8. Enumerate the actual and possible benefits of Co-operative Credit Societies.

9. Write a short critical note on the economic effects of the employment of foreign capital in India.

1918

ECONOMICS—PASS

First Paper—Political Economy

1. Discuss the relations of Production and Consumption, bringing out clearly how the ultimate control of production lies in the hands of the consumers.
2. 'The standard of living of workmen determines their efficiency. The standard can be maintained at a high level by restricting the size of the family.' Explain the doctrine and mention any exceptional circumstances which you can think, in which it will not hold.
3. Discuss the effect of the rate of interest on the growth of capital in a country.
4. How is the value of an article determined? What is meant by marginal utility?
5. Parents have a heavy responsibility regarding the choice of occupation by their sons. What evils would result if the parents were led away by mere sentiment or prejudice and did not inquire properly into the prospects?
6. Consider the social and economic effects of variations in the purchasing power of money.
7. Consider the different economic uses to which land is put in order of their intensity.
8. Why are the wages of women low compared with the wages of men for the same kind of work or for work requiring the same exertion?
9. The national dividend is a continuous stream from which all the factors of production are rewarded. Examine this statement and mention in particular how the owners of land are rewarded.
10. Criticize the following doctrine:—When giving charity, the rich are only given back in part what they have stolen from the poor and for this they deserve no credit.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. Attempt a reconciliation of the principal theories of the origin of the state, *i. e.* show what you believe to be the elements of truth in each.
2. Write a short essay on 'Democracy' showing what are its advantages and disadvantages, and explain how order and efficiency can best be reconciled with personal liberty.
3. Explain the system of representation in the two houses of the Prussian (not German) legislature before the War.

4. What are the advantages and what are the evils of party government? Can any practical, working alternative be suggested? What lessons can be learned from the experience of the Great Powers in recent years.

5. What do you understand by 'Paternalism and Laissez faire,' as applied to systems of government? Do you think that the history of the Great War has justified either?

6. Describe briefly the evolution of government. How does the English ministry differ from those in France and Italy in normal times? What do you think will be the future of the English Cabinet?

7. Give a sketch of the powers and duties of the President of the United State.

8. Compare the position of the Judicature in England, France, and the United States explaining the constitutional powers of the judges, and the way in which they are appointed.

9. Write notes on 'Nationality,' 'Empire,' 'Federal Government,' Would a universal application of the principle of Nationality be possible or desirable?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Contrast the merits and demerits of the *Khas* and *Zamindari* systems of land revenue settlement in India. Lord Cornwallis discarded the *Khas* system in favour of the *Zamindari* system; while the present day administrators prefer the former to the latter. Give reasons which have led to this change of views.

2. Enumerate the chief causes of agricultural indebtedness of this country. Give a brief account of the measures taken by Government to provide a remedy for each of these causes.

3. Define clearly the following :—

(a) Cadastral Survey. (b) Record of Rights (c) Countervailing Excise duties. (d) Alienation of land. (e) Net assets. (f) Enfranchised Inam Tenures. (g) Takavi grants. (h) Remission and suspension of revenue.

4. Discuss the respective faculties of setting up and working a cotton mill in India and in England.

5. State the foundation principles of co-operative credit societies and discuss the educative effects that flow from the practice of these principles.

6. Estimate the efficacy of the following as remedies against Indian famines :—

(a) Increased irrigation. (b) increased transport facilities. (c) Increased industrialism.

7. State the arguments for and against the introduction of gold currency in India.

8. What are the principal elements which, according to Marshall, constitute industrial efficiency? Which of these elements are inherent in Indian character, and which are difficult to assimilate?

9. The accounts of the government of India are divided into four sections as follows:—

(a) Revenue account (b) Capital account. (c) Debt and Deposit account. (d) Balances.

Explain clearly what each of these signifies.

10. Write a brief critical note (not exceeding five pages) on the hoarded wealth of India.

11. It is said that in India the rate of interest is not always determined by the conditions of supply and demand of capital and that the co-operative credit societies are tending to the establishment of what is called a *market rate of interest*.

Expound this proposition.

1919

ECONOMICS—PASS

First Paper—Political Economy

1. What is meant by elasticity of demand in reference to commodity? Give illustrations.

2. What is the importance of business ability as a factor of production? How can it be increased?

3. What is the 'law' of population according to Malthus? To what extent is it applicable to modern conditions in India?

4. On what does the growth of wealth devoted to productive purpose depend?

5. How is the balance of indebtedness between two countries settled in normal times?

6. What is meant by economic rent? What would happen if tenants have to pay more than the economic rent?

7. Indicate in any three of the following cases the manner in which earnings are determined by demand and supply for that kind of labour:—

(a) The leader of the Calcutta Bar.

- (b) A member of the Indian Civil Service.
- (c) A graduate of the Calcutta University.
- (d) A carpenter in Calcutta.
- (e) A chauffeur.
- (f) A sweeper.

8. Discuss briefly the effect of growth of communications on the organization of production and markets in a country like India.

9. What are the principal canons of taxation ?

10. What are the grounds on which the Socialists base their scheme of distribution of the national dividend between labour and capital ?

ECONOMICS—PASS

Second Paper—Political Philosophy

1. Express concisely and accurately the meanings of the political concepts—(a) *State*, (b) *Constitution*, (c) *Sovereignty*. How would you distinguish *State* from *Government* ?

Is India a sovereign state ? If not, where would you locate the sovereignty ?

2. 'Strictly speaking, there can be no such thing as a federal state.' Expound this proposition.

By what characteristic marks is a modern federal union differentiated from a confederation ?

3. Describe the constitutional relation between England and India. Is this relation politically sound ? If not, point out the unsound features, and suggest on what lines improvement is possible.

4. Explain clearly what you understand by Democracy. What are the merits and demerits of representative democracy ?

5. Discuss the proposition that sovereignty is not antagonistic to liberty.

6. Define *law* so as to bring out clearly the nature of *State*, *sovereignty*, and *right*.

7. The constitution of England is said to be (a) *un-written*, (b) *flexible*; (c) *legal*, (d) *unreal*. Discuss this statement.

8. Describe the relation between the legislature and the executive in (a) England, (b) India, (c) the United States.

9. What relation does exist between the *State Government* and the *Federal Government* in America ? Examine the part which the *Supreme Court* plays in the American Constitution.

10. Give a general outline of the legislative and executive functions of government. Are there any general principles underlying the exercise of these functions ?

To what extent does the Government of India exercise or forbear from exercising such functions ?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Give a brief outline of the history of Indian foreign trade down to the end of the 18th century. Contrast the character of the foreign trade of the 18th century with that of the present time.

2. Give an account of the mineral wealth of India. Is it such as to afford for supposing that India can become an important manufacturing country ?

3. Carefully explain what is meant by a Revenue Settlement in Bengal. How is it carried out ? Under what conditions can the rent of an Occupancy holder in Bengal be raised ?

4. Explain as fully as you can the following terms :—

- (i) Patnidar.
- (ii) Talukdar.
- (iii) Waqf lands.
- (iv) Abwab.
- (v) Utbandi tenures.
- (vi) Khas mahal.

5. Describe carefully the organization and functions of a Village Co-operative Credit Society. How far do you consider that these Societies normally realise the ideal of Co-operation ?

6. Explain precisely the meaning of a Gold Exchange Standard. How does it differ from a simple Gold Standard ? Which of these two standards do you consider the better for India, and why ?

7. What are the principal measures adopted by Government for relief in the event of Famine ? Can you suggest any improvement upon the existing methods ?

8. Examine the principal causes for the variation of agricultural prices in India. Do you consider that rising or falling of prices are preferable from the standpoint of general prosperity ?

9. Compare the advantages and disadvantages of the Permanent Settlement with the Rayatwari system of Land Revenue.

1920

ECONOMICS—PASS

First Paper—Political Economy

1. Distinguish between nominal and real wages and point out the special allowance to be made in ascertaining the real wages of any group of labourers.

2 (a) What is money ? (b) Describe its chief functions, (c) Comment on the statement—'Bad money drives good money out of circulation.'

3 (a). Distinguish marginal utility from total utility ; (b) How far is it correct to say that value depends on marginal utility ?

4. Examine the effects of machinery on labour, and discuss whether the progress of mechanical invention is injurious to the labouring classes.

5. (a) Define the term 'market'. (b) What are the chief conditions which a commodity must satisfy to have a wide market ? (c) State, with reasons, what you would expect to be the extent of the market for bricks, fresh vegetables and precious metals.

6. Under what conditions can group of labourers in a trade, by artificially limiting their supply, secure a considerable increase of their wages ?

7 (a). On what grounds is protection generally upheld ? (b) To what extent do those arguments apply to Indian conditions ?

8. Discuss any two of the following theories of wages :—(a) Subsistence theory, (b) Wages Fund theory, and (c) Residual Claimant theory.

9 (a). Describe the essential features of bimetallism and state the arguments which are generally urged for and against its adoption. (b) Under what conditions is it still possible to maintain a successful scheme of bimetallism ?

10.(a). Account for the favourable balance of Indian foreign trade. (b) How far does the excess of Indian exports over imports invalidate the theory that the exports and imports of a country must be equal ?

ECONOMICS—PASS

Second Paper—Political Philosophy

1. Define accurately the political concepts :—(a) *State*, (b) *People*, (c) *Nation*, and (d) *Sovereignty*.

What political ideas are conveyed by the expression—'Rise of Indian nationalism' ?

2. 'The statement that while the constitution of man is the work of nature, that of the State is the work of art, is as misleading as the statement that Governments are not made but grow.'

Examine and elucidate this proposition.

3. Distinguish between rigid and flexible constitutions. Are the constitution of (a) America, (b) France, (c) Germany, (d) England, (e) India, rigid or flexible? Give your reasons.

4. Contrast broadly the form and nature of modern with those of ancient democracy.

5. In what essential points does the analogy between the State and a natural organism fail? What do you understand by the 'organic relation between the State and the individual'?

6. 'The liberty of an individual is not always in inverse ratio to the amount of State regulation'. Examine and illustrate this proposition.

7. Distinguish between 'civil' and 'political' rights. How are civil rights guaranteed in (a) America, and (b) England?

8. Define the nature and contents of 'public spirit'. What in your opinion, are the conditions favourable to its growth? Do such conditions exist in India?

What are the essential elements of patriotism? How would you differentiate it from 'public spirit'?

9. What constitutes the Executive in England? Describe its relation to the Legislature. Is the power of the king to appoint the Prime Minister subject to any limitation?

10. What is the relation of the Executive to the Legislature in India? What are the moral and political effects of a 'solid' official vote in the Indian legislature?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Locate in Bengal (a) the distribution of mill industry; (b) the countries of coal mining; (c) the important seats of artistic industry; (d) the important inland distributing centres for jute; (e) the tea gardens; and (f) the important ports.

2. *Either*, Examine the principal features of the transition from the agricultural to the industrial stage.

Or, Specify the divisions of labour in a particular handicraft or cottage industry with which you are familiar.

3. *Either*, What, in your opinion, are the chief hindrances to industrialism in our country? How can we avoid the evils of the later day industrialism of the west?

Or, Characterize the principal types of land tenure in India and indicate the economic bearing of each.

4. Discuss the comparative importance of railways and waterways in India. What are the economic effects of the decline of waterways in Bengal?

5. Examine briefly the institutions of joint family and the caste, discuss fully their economic effects.

Or, Give your own plan for the rehabilitation of the village system that is based on these.

6. *Either*, Write a short historical account of the tenancy legislation in Bengal.

Or, Write a short historical account of the development of Indian mill industry.

7. Analyse the Home Charges.

Describe the method by which the Home charges are paid by India to England,

8. What is the Gold Standard Reserve?

Give reasons for and against the keeping of this reserve in London.

9. *Either*, Examine briefly the limits and direction of State action with regard to the development of manufacturing industries in India.

Or, Examine briefly the methods and organization of agricultural and industrial co-operation in India.

10. *Either*, The social conditions of labour life in the city factory and the crowded *bustee* have serious effects detrimental to health and efficiency. Elucidate.

What methods would you suggest for the improvement of the efficiency of Indian mill labour?

Or, Discuss fully the defects and difficulties of Indian agriculture. What methods would you suggest for its improvement?

11. *Either*, Analyse India's exports. Hence examine the arguments for and against Protection.

Or, Examine the limits and direction of the use of foreign capital in India.

ECONOMICS—PASS**First Paper—Political Economy**

1. Distinguish between value and price, and inquire whether there can be (a) a general rise of values, (b) a general rise of prices.
2. State the law of demand. When is a demand for a commodity said to be elastic. Consider in this connection the nature of the demand for salt and pianos.
3. What do you understand by Capital? How does Capital originate? Distinguish between Fixed Capital and Circulating Capital.
4. State the causes leading to the localisation of different industries. Illustrate some of the consequences of such localization by reference to Indian industries.
5. Estimate the advantages of international trade.
6. Show how by means of a Bill of Exchange a sale of goods to a merchant in London, by a merchant in Calcutta, and a sale to a merchant in Calcutta by a merchant in London, may be liquidated without the sending of species from one country to another.
7. What is inconvertible paper money? What are its defects?
8. 'The flow of specie from one country to another sets in motion forces which sooner or later stop the flow'. Amplify the statement.
9. State and explain the relation of agricultural rent or the price of agricultural produces.
10. Distinguish between gross interest and net interest, and account for the high rate of interest generally charged by the Indian money-lender to the ryot.

ECONOMICS—PASS**Second Paper—Political Philosophy**

Only Six questions to be attempted

1. Enumerate the sources of 'Law'. Explain its nature in the modern State.
Distinguish between 'public law' and 'private law.' What is the nature of 'International law'?
2. Analyse the concept of 'Popular Sovereignty'. State the objection to the doctrine.

3. What do you understand by the term 'independence of the judiciary'? Why is it necessary in a State that the judiciary should be independent? What should be their functions and qualifications?

4. Describe the nature of Federal Government. What are the conditions that favour the formation of a federal union?

5. Distinguish between 'sovereignty' and 'administrative autonomy illustrating your answer by reference to the constitution of the Empire.

6. Define 'constitution' of a State. In what respects do you call the British Constitution a good, and in what respects a bad, constitution?

7. Annotate *two* of the following :—

(a) In England the Legislature is not restricted at all; in America it is 'doubly' restricted.

(b) The British Government may be more accurately called a 'limited democracy' than a 'limited monarchy'.

(c) The Cabinet in England is a unit—a unit as regards the sovereign, and a unit as regards the legislature.

(d) The Prime Minister of Great Britain is the keystone of the Cabinet arch.

8. Give the character of the Party System in France. What are the reasons for which it has not been as successful as the Party System of England?

9. How do physical environments influence the character of the people in a State? Illustrate your answer by reference to India and the British Isles.

10. Define 'Representative Government', and distinguish it from 'Responsible Government.'

What are 'direct' and 'indirect' methods of electing representative? What should be the duties of a representative?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Describe the effects of the monsoons on Indian agriculture.

2. "City India stands separate from rural India." Examine the significance of the above.

3. Locate the chief mining industries of India. Examine the economic efforts of the development of mineral industries by (a) European and (b) Indian capital and enterprise.

4. Mention the economic effects of the recent rise of prices in India.

2. Examine the measures adopted by the government to solve the problem of agricultural indebtedness in this country.

3. Enumerate the chief defects on Indian industrial labour and suggest measures for improving its efficiency.

4. Give an account of the present position and discuss the future possibilities of non-credit co-operative societies of this country.

5. Discuss the need of the foreign capital for the industrial development of India.

6. Describe the main systems of land settlement established in British India.

7. Trace the history of the Indian currency system from 1835 to 1900.

8. Describe the chief characteristics of India's foreign trade and account for the permanent excess of her exports over her imports.

9. Examine the case for and against the State management of Indian railways.

10. Discuss the advantages and drawbacks of the imposition of protective duties on the manufactured imports of this country.

1923

ECONOMICS—PASS

First Paper—Political Economy

Only six questions to be attempted.

1. 'The problem of population is not one of mere size, but of efficient production and equitable distribution'. Discuss.

2. Give a brief account of the Mercantile Doctrine.

3. Discuss the merits and defects of competition as a factor in modern industry.

4. 'Value is at bottom the expression of marginal utility'. Amplify.

5. Discuss the economic functions of speculation.

6. Point out the intimate relation which subsists between wages and efficiency. Is it true to say that poverty causes degradation?

7. Describe the various functions of a modern bank.

8. Summarize the principal arguments in favour of free trade and protection respectively.

9. 'Credit is capital'. Discuss.

10. Write short notes on :—

(a) Consumer's surplus ; (b) the principle of substitution ; (c) normal value.

ECONOMICS—PASS

Second Paper—Political Philosophy

Only six questions to be attempted.

GROUP A

1. Dr. Garner defines 'State' as follows :—'The State is a concept of Political Science and Constitutional Law, is a community of persons more or less numerous, permanently occupying a definite portion of territory independent of external control, and possessing an organized government to which the great body of inhabitants render habitual obedience,' and then goes on to remark that the essential constituent elements—political, physical, and spiritual—of the modern State are all brought out in this definition'. Explain how. Bring out clearly the relation between the Government and the State. Is it correct to say that the Government of Great Britain is Sovereign ? If not, give your reasons.

2. Explain what you understand by the 'organic theory of the State.' What are its limitations ?

3. Criticize Aristotle's classification of States.

It does not follow that the form of government in any given State is identical with the form of the State, though usually they are similar in form and spirit'. Comment on this.

4. Popular Government is broadly distinguished into two divisions :—(a) Direct, (b) Representative.

Discuss the merits and demerits of these two forms of government.

5. Define 'Constitution.' Why is it necessary for a federal Government to have a written Constitution ? What is the greatest weakness of a written Constitution ?

6. Explain the principle underlying the 'representation of CLASSES and INTERESTS. On what grounds has this doctrine been attacked by political theorists and defended by practical politicians ?

7. The executive of any government must possess—

- (a) Unity of organization ;
- (b) Duration ;
- (c) Adequate provision for its support ;
- (d) Competent powers.

Discuss the necessity of each, specify the powers which are usually exercised by the Executive.

GROUP B

1. Give your reasons for saying that the British Parliament is the sovereign authority for the Government of India. In what position does the Secretary of State stand in relation to parliament?
2. What are, and what ought to be, the functions of the Government of India in India?
3. Describe the gradual steps in the evolution of popular representation in the Provincial Councils. To what extent has this evolution been helped by political events?

GROUP C

1. Summarize the mutual relations between the executive, the legislative, and the judicial bodies in England and the United States.
2. 'The framework of the United State Constitution presents a superficial RESEMBLANCE to that of France. But the DIFFERENCES are as pronounced as the resemblances'. Bring out clearly these resemblances and the differences.
3. Give a broad outline of the organization of local government in France.

ECONOMICS—PASS**Third Paper—Indian Economics**

1. Indicate the principal heads of revenue of the Government of India and the Government of Bengal. To what extent are these sources of revenue elastic?
2. Describe the composition and functions of the Indian Paper Currency Reserve.
3. What part do the Exchange Banks play in financing the international Trade of India.
4. Discuss the relation of the Bank of India to the State.
5. Analyse the causes that led to the rise of the Indian Exchange in 1917.
6. India is described as a sink for the precious metals of the civilized world. Account for the seemingly large absorption of precious metals in India.
7. 'Modern Indian famine campaign is one of the most remarkable achievements in history of scientific administration.' Describe the measures adopted in India for the prevention and relief of famines. How far those measures succeeded in their aims?
8. Give an account of the activities of the government in this country in stimulating industries.
9. It is sometimes suggested that a heavy duty should be levied on the export of food grains from India with a view to conserve

India's food supply for her own use. Argue the case for and against such a proposal.

10. Write notes on any *two* of the following :—(a) cadastral record, (b) occupancy ryot, (c) the octroi, (d) the Pittman Act.

1924

ECONOMICS—PASS

First Paper—Political Economy

1. Describe the part played by capital in the modern industrial system.

What are the different ways in which capital is organized ?

2. Examine the wages fund theory.

What principles would you suggest for adoption in order to secure an equitable division of the product of industry ?

3. Discuss the advantages and disadvantages of the international division of labour.

4. Describe the importance of the transportation in the modern system of manufacturing.

What effect does cheap transportation tend to produce on the size of markets ?

5. Define 'taxation'.

Discuss the merits and defects of direct and indirect taxes.

6. Describe the connexion between production and consumption.

Is the consumption of luxuries beneficial in an economic sense to society ?

7. What is meant by 'freedom of enterprise' ?

Discuss the influence of economic freedom on production.

8. Describe the various functions performed by a modern bank.

What place does the Bank of England occupy in the monetary organization of Great Britain.

9. What is 'bank rate' ?

Describe the connexion between the bank rate and the rate of any locality.

10. Explain the following terms :—Producer's goods, consumers' goods, normal price, monopoly price, marginal utility, circulating capital, market, and demand.

ECONOMICS—PASS**Second Paper—Political Philosophy**

1. Define an 'organism.' Indicate the exact implications of—'the organic theory of the State resembles an organism in all points'. How is the relation between the state and the individuals defined by the organic theory?

2. Dr. Garner writes : 'We are, therefore, led to the conclusion that the State is neither the handiwork of God, nor the result of superior physical force, nor the creation of resolution or convention, nor a mere expansion of the family'.

Answer briefly what you understand by each of these statements and give the correct conclusion about the genesis of the State.

3. 'The Federal union,' Dr. Garner says, 'is a sort of composite state, a new creation of constitutional law, not a band of states connected together by International agreement.'

4. State the distinguishing marks of an ancient and a modern Republic.

How is the doctrine of Popular sovereignty applied to representative democracy? The English Government is at once a monarchy, an aristocracy, and a democracy. Explain how.

5. What is Dr. Garner's view about the ends of the State distinguished as (a) original and primary, (b) secondary, and (c) ultimate and highest?

6. 'Constitutions grow and are not made.' Criticize this doctrine with special reference to the Constitution of India.

7. 'The strict separation of power' says Dr. Garner 'is not only impracticable as a working principle of government, but it is not one to be desired in practice.' Explain why.

On what grounds is the present system of the union of judicial and executive powers in India defended by the Government?

8. Classify, after Dr. Garner, the executive powers of government? Distinguish between executive and administrative powers. Give reasons for vesting the power of pardon in the Executive.

9. What are the functions and jurisdiction of the French Administrative Courts? Discuss the advantages of, and objections to, these Courts,

GROUP B

1. 'The party system in France has not been remarkably successful.' Why not?

The defeat of a French Ministry does not mean the transfer of

political control from one party to another. The defeat of the British Ministry does mean such transfer. Give reasons.

2. A second chamber is almost indispensable in federation such as the United States is. Why ?

3. Indicate briefly the powers of the House of Commons and the House of Lords with reference to money Bills.

GROUP C

1. 'We must distinguish, however, between the measure of control which has been exercised by the Secretary of State and the powers of control which the existing system provides.' [Montague-Chelmsford Report, Para. 36.]

Describe the character and extent of the powers referred to.

2. Compare the constitution and powers of Provincial Legislature under the Morley Minto scheme with those of the same body under the new Reforms scheme.

In what respect is the present constitution an improvement on the old ?

3. Discuss the question whether the Indian constitution is of federal type.

ECONOMICS—PASS

Third Paper—Indian Economics

1. Indicate the causes that help the growth of capital in a country. To what extent are those causes present in India ?

2. Describe briefly the essential features of the Gold Exchange Standard. What part does the Gold Standard Reserve play in the Indian currency system ?

3. 'Stability of exchange is essential from the point of view of foreign trade.'

Illustrate the truth of this remark with reference to Indian conditions.

4. Argue the case of the reversal of the permanent settlement of land revenue in Bengal.

5. Describe the system of land tenure prevalent in the United provinces.

6. Describe the utility of the Co-operative grain banks in Bengal.

7. What are the economic effects of the law of succession prevalent in India ?

8. Examine the probable effects of a policy of Protection upon the economic condition of the agricultural population of this country.

9. Locate the chief mining industries of India.

10. Write short notes on any THREE of the following :—
- (a) The excise duty on India cotton textiles.
 - (b) The salt tax.
 - (c) The Punjab Land Alienation Act.
 - (d) The Indian Paper Currency Reserve.
 - (e) State *vs.* Private ownership of the Indian railways.
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1925

ECONOMICS—PASS

First Paper—Political Economy

1. What do you mean by 'elasticity of demand'? Would the demand for a commodity be elastic or inelastic (a) if it is one of the necessities of life, (b) if there are many possible uses for it, (c) if it has many substitutes, (d) if its use constitutes a habit?
2. Define 'total' utility' and 'marginal utility', and explain clearly the place of the conception of marginal utility in the theory of value.
3. Examine the effects of machinery on labour, and discuss whether the progress of mechanical inventions is injurious to the labouring classes.
4. Estimate the importance of the element of time in the theory of value.
5. What is bimetallism. Describe its chief advantages and disadvantages.
6. Consider the economic effects of rising and falling of prices.
7. (a) How is the economic rent of land determined?
(b) Would there be any economic rent if there were no tendency to diminishing returns from land?
8. Discuss the effects of trade unionism on wages and conditions of labour.
9. State the theory of international values.
10. Write notes on any *three* of the following :—
 - (a) Productive Co-operation.
 - (b) Labour Co-partnership.
 - (c) Real and Nominal Wages.
 - (d) Favourable and Unfavourable exchanges.
 - (e) Canons of taxation.

ECONOMICS—PASS**Second Paper—Political Philosophy****GROUP A**

1. Discuss the theory that the *State* is not identical with the *Nation*.

What do you understand by a 'National State,' and the 'Principle of Nationality'?

2. Differentiate between People, Citizens, Subjects, and Electors.

3. 'Some of these biological comparisons are ingenious and well-stated; to many writers they have proved fascinating and seductive; to others they have constituted the basis of an argument for a theory of the State which would sacrifice the individual to Society.'

Amplify and explain the last sentence.

4. 'The difference between a Federation and a Confederation arises wholly from differences in respect of the location of sovereignty in the grouping.' Explain this.

5. What are the conditions necessary to the formation of a Federal Union? Why is it necessary that a Federal Constitution should be written?

6. Give some representative views about the merits and defects of Democracy.

It is said that Democracy produces inequality as well as equality. Explain this.

7. Expound clearly the doctrine of Popular Sovereignty. What are its limitations?

8. Discuss briefly the essential features of the Individualistic and Socialistic function of Government. Point out the errors in both theories.

9. Discuss the question whether representation should be 'instructed' or 'uninstructed.'

10. Distinguish between Administrative and Executive functions. State the general principles on which the Executive should be organized.

GROUP B

1. Of all second chambers you have studied, the French Senate is probably the weakest, and the American Senate the strongest. Discuss.

2. The English House of commons makes the Ministry, but the Ministry can unmake the House.

Explain this; and contrast it with the relation in which the French Ministry is held to the French Lower House.

3. Describe briefly the relation between the Executive and the Legislative in the new German Constitution.

4. What are the functions and jurisdiction of the English House of Lords as the Highest Court of Justice.

GROUP C

1. Contrast the relations between the Provincial and Central Government in India before and after 1919.

2. What were the salient features of the Indian Constitutional Reforms of 1909? In what respects were they considered defective or inadequate?

3. Distinguish between Central, Provincial, Reserved, and Transferred Subjects. By what authority is each class of subjects administered, and to which is each authority ultimately responsible?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Comment on the following :—Even if the system of production on a large scale be adopted in India, that small industries need not die out.

2. Describe the chief characteristics of Indian industrial labour. Examine the contention that low paid labour is not necessarily cheap.

3. 'Credit is an indispensable factor in business'. Show how credit is supplied in India to (a) the agriculturist, and (b) the trader.

4. Describe the main features of tenancy legislation in India.

5. 'The Railways in India are owned and worked under a variety of conditions'.

Examine with reference to the history of railway construction in India the circumstances that account for this variety.

6. Describe the various types of Banks that exist in India.

'The Government of India itself is a great banker'—Comment.

7. How did the value of silver influence the Indian exchange (a) during the period 1876-93. and (b) during the period 1917-20?

8. Summarize the main provisions of the Indian Paper Currency Act of 1920.

9. 'In the modern era of international commerce every civilized nation makes a number of payments to foreign countries and receives a number of payments from foreign countries.'

Consider the different heads under which these payments are made and received by India.

10. Write a short note on the public debt of India.

1926

ECONOMICS—PASS

First Paper—Political Economy

1. What is an Economic Law? Examine in this connection the statement that 'the laws of economics are to be compared with the laws of tides rather than with the simple and exact law of gravitation.'
2. Describe the relation between production and consumption. Is the consumption of luxuries beneficial to society from the economic point of view?
3. State the law of diminishing returns with its limitations. Consider the bearing of this law on the theory of rent.
4. 'I cannot understand the stress laid by economists on the necessity of checking the growth of population. Every person born into the world brings with him not only a need for goods, but also the power to produce these goods.' Comment on the above statement.
5. 'Competition is neither wholly bad nor wholly good.' Amplify.
6. How does the determination of price by a monopolist differ from its determination under conditions of competition?
7. Explain clearly the relation between the quantity of money in circulation and the general price level in a country.
8. Examine the chief arguments generally advanced in favour of protection.
9. 'Railway rates are fixed on the principle of charging what the traffic will bear.' Explain.
10. Write notes on the following :—
 - (a) Demand Schedule. (b) Consumer's Surplus. (c) Quasirent. (d) Profit-sharing.

ECONOMICS—PASS

Second Paper—Political Philosophy

GROUP A

1. 'The communities of which federal unions are composed are not states in the strict sense of the term.' Discuss.
2. Examine. 'Aristotle's classification of states has been the cause of much confusion from a failure to discriminate between forms of state and forms of government'.
3. What precisely is the relation between law and liberty?

Do you agree with the view that there is no necessary connexion between democracy and liberty ?

4. In what sense and with what limitations is the theory of separation of powers true ?

GROUP B

1. Comment on the following statements as applied to the British Constitution :—

(a) The King can do no wrong. (b) The King never dies.

2. State the provisions of the Parliament Act, 1911. What has been the effect of this Act on the position of the House of Lords ?

3. Illustrate the distinction between parliamentary and non-parliamentary executive from Great Britain and the United States of America.

4. Describe the powers of the President of the United States of America.

GROUP C

1. Examine the relation between the Legislature and the Executive in a Governor's province under the Government of India Act, 1919. Do you consider the relation satisfactory ?

2. What are the powers of the Governor-General of India to pass emergency legislation.

ECONOMICS—PASS

Third Paper—Indian Economics

1. Give an idea of the principal mineral products of India with reference to their location and distribution.

2. 'The problem of Indian agricultural development is mainly a problem of water supply.' Discuss the various ways by which attempts have been made to solve this problem.

3. 'The industrial system in India is unevenly and in most cases inadequately developed.' Discuss.

4. 'In India, too, the population has been increasing with disquieting rapidity owing to the removal by British rule of many of the checks to population which formerly prevailed'.

Comment on the view embodied in the above quotation.

5. 'Land revenue is and has always been the mainstay of Indian finance'. Discuss this statement, and indicate the methods and the principles by which land revenue is assessed in India.

6. What are the different forms in which foreign capital enters

India? How far does the employment of foreign capital help or hinder the development of Indian industries?

7. Trace the circumstances that led to the adoption of the Gold Exchange Standard in India. Describe its chief features, and indicate the causes of its breakdown during the last European war.

8. What are the effects of a high sterling value of the rupee upon (a) Indian trade and industries, (b) charges?

9. 'The excise duty on the cotton industry of India violates every principle of sound taxation.' Discuss this statement with reference to the circumstances that led to the imposition of this duty.

10. Write notes on—

(a) The Punjab Land Alienation Act. (b) The Imperial Bank of India. (c) Guarantee System. (d) American cross-rate.

1927

ECONOMICS—PASS

First Paper—Political Economy

1. Examine the characteristics of 'wealth.' Discuss whether the following ought to be regarded as 'wealth':—(a) fresh air, (b) the copyright of a book, (c) intoxicating liquors, and (d) the dexterity of a mechanic.

2. 'Iron is more useful than diamonds; yet diamonds are incontrovertibly more valuable.' How would you explain this?

3. Cost of production is coming more and more to mean joint cost; 'the price of a given product may bear only a remote relation to its individual cost of production.' Illustrate.

4. What are the causes leading to the localization of different industries? Mention the chief consequences of such localization.

5. Describe the various forms of combinations among producers. Are such combinations necessarily injurious to society?

6. 'Land rent is a differential or surplus product.' Explain this statement and discuss the nature of building rents.

7. Distinguish between gross interest and net interest. Examine the causes that determine the rates of net interest at any particular time, and point out the obstacles in the way of the regulation of the rate of interest by legislation.

8. What precautions are necessary in using Index Numbers as a test of change in the purchasing power of money?

9. Discuss the comparative merits of the issue of paper currency by banks and by the Government respectively.

10. 'Bank deposits have in modern time changed from deposits of such to deposits of credit.' Explain.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. Define an Organism and differentiate it from a Machine.

Give a brief statement of the Organic Theory of State, explaining in what respects it resembles and in what it differs from an animal organism.

2. Illustrate the characteristics of a Federal Government by reference to the United States.

3. 'The Government of England is a monarchy, an aristocrat, and a democracy.' Explain.

4. Differentiate between the Cabinet Government of France and that of England.

5. Bring out clearly the merits and defects of a bureaucratic and a popular government.

6. Distinguish between the legal and the political sovereignty of a state by special reference to the Government of England.

7. A state consists of the following elements:—(a) a constitution, (b) Sovereignty, (c) Law, (d) Government.

What does each of these terms mean, and how are these elements related to each other?

8. What should be the relation between the Executive and the Legislature in a government?

Distinguish between Absolute Veto, Qualified Veto, and Suspensive Veto, showing the occasion for the exercise of each.

9. On what general principles is the constitution of the Indian Legislature under the Reforms based?

10. Bring out the utility of the Chambers in the Central Legislature of India.

To what extent can the Upper Chamber as now constituted fulfil its function in the Constitution?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Mention (a) the chief food crops, and (b) the chief textile crops of India. To what countries are they principally exported?

2. 'Probably there is no other single group of weather phenomena which is so far-reaching in its effects as the Indian monsoon' Discuss this statement with reference to the economic effects of a failure of the monsoon in India.

3. What are the obstacles in the way of the agricultural improvement in India? How would you meet them?

4. Examine the possibilities and limitations of the hand loom cotton industry in India.

5. Describe the effects which railways have produced on the industries and on the economic conditions of the people of the country.

6. Show how the exchange value of the rupee was maintained at 1s. 4d. before the war, and discuss the advisability of India going back to the pre-war exchange rate.

7. 'A gold exchange standard cannot provide an efficient remedy for the defects of the existing system of Indian currency'. Discuss.

8. Describe the Indian Banking System.

9. Distinguish between direct and indirect taxes. Discuss their respective merits, and give an account of the direct taxes levied in India.

10. Write notes on any two of the following :—

(a) The separation of the Indian railway finance from the general finance.

(b) The merits and demerits of the Meston settlement.

(c) The inclusion of Indian in a scheme of inter-imperial preferential tariffs.

1928

ECONOMICS—PASS

First Paper—Political Economy

1. Discuss the effect of increased consumption of (a) wheat and (b) steel manufactures, on the value of these commodities.

2. 'Market values are governed by the relation of demand to stocks actually in the market; with more or less reference to future supplies, and not without some influence of trade combinations.' Explain and illustrate.

3. What are the constituent elements of profits?

A grocer expects a profit of 25 per cent. on his turnover, while a wholesale dealer in jute is satisfied with a profit of 1 per cent. or even less. How would you explain this?

4. 'Rent is paid for the original and indestructible powers of the soil.' Discuss.
5. For what different reasons may a country's exports habitually exceed or fall short of its imports?
6. What are the essential characteristics of a gold standard? Consider the effects of the following on the value of gold standard currency :—
 - (a) increased output of gold ;
 - (b) prolonged trade depression.
7. Discuss the various economic consequences that follow from a change in the value of money.
8. Write a note on the Bank Charter Act of 1844, and estimate the importance of the Bank of England in the English Banking system.
9. State and illustrate Adam Smith's canon's of taxation.
10. Write notes on the following :—
 - (a) Productive and unproductive labour.
 - (b) Fixed and circulating capital.
 - (c) Prime and Supplementary costs.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. How has the conception of liberty varied at different times and among different peoples?
2. Explain carefully the rights and duties of citizenship.
3. Examine the theory of Separation of Powers. How far has this theory been translated into practice in Great Britain, France, and Germany?
4. Describe the place which the self governing colonies occupy in the Empire. What is the extent of their autonomy? In what respects are they subject to the control of the British Government?
5. Discuss the position of a minister in an Indian province in relation to (a) the Governor of the province, (b) the provincial Legislative Council.
6. What is the position of the States in the American Union? What are their power? State some of their rights and obligations as members of the Federal Union.
7. Describe the role of the Cabinet in the English system of government. What is its relation (a) to the Crown, (b) the Parliament?

8. Discuss the administrative and judicial powers of the Executive in France.

9. Describe the organization and powers of the Indian Legislative Assembly.

ECONOMICS—PASS

Third Paper—Indian Economics

1. What are the effects of the development of communications on the internal economy of villages? How far is it possible to make the process of adjustment to the new conditions more gradual?

2. What are, in your opinion, the criteria by which the success of the Co-operative Movement should be judged? Has the movement succeeded in Bengal? Give facts in support of your answer.

3. What is the position of the Provincial Co-operative Banks in the co-operative organization of India? Is it necessary to create an All-India Institution to finance the Provincial Banks?

4. Describe the main features of the Indian Paper Currency System, and state how far the recent changes have increased the security and elasticity of the note issue.

5. Explain the position of the Exchange Banks in the import and export trade of India. How will they be effected by the creation of the Reserve Bank?

6. Describe the present position of the Trade Unions in India. What will be the effect of the recent legislation on the progress of the movement?

7. Give a brief historical account of the opium policy of the Government of India. Is the present policy of the Government open to serious criticism?

8. What are the grounds on which the revision of the Meston Settlement is necessary from the point of view of Bengal? Is there any conflict between it and the interest of the country as a whole?

9. Examine critically the main provisions of the Income-Tax Act of 1922, and explain its significance in the development of the Indian fiscal system.

10. How do you account for the undeveloped state of industrial banking in India? What are the conditions under which the success of the industrial Banks can be ensured? Is it possible to create those conditions in India?

1929

ECONOMICS—PASS

First Paper—Political Economy

1. Explain what is meant by an economic law, and compare it with (a) moral law, (b) law administered in courts of justice, and (c) law of natural science.
2. (a) What are the chief causes of localization of an industry ?
(b) Why is the jute mill industry of this province localized in the neighbourhood of Calcutta and not in the jute-growing areas of Eastern Bengal ?
3. What do you mean by 'the efficiency of labour' ? Examine the chief factors which determine the efficiency of a worker in modern industry.
4. 'Gas and coke are produced jointly.' Show how their prices are determined. What would be the effect of an increased demand for gas on the price of coke ?
5. Show the importance of the distinction between the short period and the long period in a discussion of the theory of value.
6. 'Monopoly price is influenced by cost of production, but in a different way from competitive price.' Discuss this statement.
7. How is the economic rent of land determined ? Would there be any economic rent if all lands were equally fertile ?
8. Describe the essential features of bimetallism, and discuss whether bimetallic standards keep prices steadier than mono-metallic standards.
9. Discuss the nature of credit, and consider its influence on prices.
10. What do you mean by specie points ? Explain how they are arrived at.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. Estimate the importance of freedom of speech, and discussion. State how it is secured in various modern constitutions, and discuss how far (if at all) it should be interfered with in times of war. How would you secure this freedom in the future constitution of Swaraj India ?
2. Discuss the practical importance of the social contract theory in actual political development.

3. Write a historical note on the role of the Privy Council in the British constitution.

4. State the Austrian theory of sovereignty and discuss the extent to which modern Austrians have modified that theory in response to subsequent criticism.

5. Discuss the problem of the adequate representation of minorities. State what you know concerning the schemes which have been invented to deal with this problem, and give your own views as to the best method to adopt in India.

6. What do you understand by 'self determination' as applied to nationalities? Discuss the limitation within which this self-determination seems to you possible and desirable.

7. State the extent to which the original American constitution reflected the ideas prevalent at the time it was drawn up, and discuss, how, and how far, it has since undergone modifications in response to a change of ideas.

8. In the event of your being invited to give evidence before the Simon Commission, what would you say concerning the relationship between the Central Indian Government and the Provinces.

9. State the case both for and against female suffrage, and give your own opinion.

10. Sketch in outline the main stages of the evolution of law and discuss the relationship between law and morality.

ECONOMICS—PASS

Third Paper—Indian Economics

1. Give an account of the forest policy of the Government of India. Discuss in this connexion the importance of forests in the economic life of India.

2. What is the origin of the caste system? Discuss how far it is unsuited to the structure of modern society, and show how, under the stress of modern economic conditions, the rigidity of the old caste system has been considerably modified.

3. Write brief notes on any five of the following :—Saharanpur rules, Octroi, Famine Insurance Fund, Cadastral record, Reverse Councils, Guaranteeing Unions, Gold-exchange standard, Statutory tenant, Ways and Means.

4. Explain the economic importance of the stabilization of the rupee. Would you advocate a reversion to the 1s. 4d. rate? Discuss the economic effects of such a policy.

5. Do you think that a Central Bank for India is desirable? In what ways would it be an advantage to India?

6. Discuss the economic and financial advantages and disadvantages of a system of state management of railways in India. Show how far it has been adopted in India.

7. What is the position of jute in the foreign trade of India? Discuss in this connexion the economic effects of a restriction of jute cultivation as advocated by the Congress party in Bengal.

8. One of the objects of the Permanent Settlement, it was argued, was to supply capital to the land. Show how far it has served that purpose. Would you justify the continuance of the Permanent Settlement in the present economic and financial condition of Bengal? Give reasons for your answer.

9. 'The existence or even the growth of an agricultural debt is not a calamity by itself. It is indebtedness for unproductive purposes and at usury rates that constitutes the gravest danger to the economic life of rural India.' Explain this, and state briefly what steps have been taken to meet the evil and thereby to stabilize the rural life of India.

10. Classify the public debt of India. How far do you think our debt position is economically sound?

11. 'The appropriation of the peasantry by the money lenders is a social and political danger.' Explain this, and indicate the remedies that have been applied to meet the evil.

1930

ECONOMICS—PASS

First Paper—Political Economy

1. Define wealth, and discuss the relation between wealth and welfare.

2. 'Monopolies should be very carefully watched and controlled by the State.' Why and how?

3. What are the possible occasions when the price of an article is expected to go up?

4. Examine the connexion between the price of the finished commodity and the wages of the labour which helped to produce it?

5. How would you explain the fact that labour in different occupations earns strikingly different rates of wages?

6. Explain the banking proposition—Loans create deposits.

7. What would be the consequence of an arbitrary lowering, by a Government decree, of the price of an article below its competitive level?

8. 'The rich should pay more in taxes than the poor.' Why? Illustrate how, in practice, certain taxes follow this principle and others violate it.

9. What harmful effects follow from an excessive division of labour between persons and between places?

10. Write notes on—marginal utility, the Stock Exchange, the incidence of a tax, derived demand, depreciation of money.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. State what you understand by liberty and discuss the difficulties pertaining to the realization of liberty in democratic countries.

2. 'A law is a command which obliges a person or persons to a course of conduct.' Comment on this definition, considering particularly the cases of (a) customary law, (b) equity, (c) international law.

3. (a) Enumerate and briefly describe the privileges of the House of Commons.

(b) Write a short note on the functions and powers of the Speaker.

4. 'One of the most remarkable phenomena of modern political development has been the security of the British kingship.' Discuss. Show the importance in the British Constitution of (a) the impersonal Crown and (b) the personality of the king.

5. What do you understand by a citizen? In what ways is the position of citizen superior to that of an alien? What important differences concerning the acquisition of citizenship exist in the laws of various States?

6. What do you understand by party government? Compare and contrast the United Kingdom, the United States, and France from the point of view of the practical influence of their party systems upon their forms of government.

7. What are the functions and powers of a second chamber in a unitary State? Give your reasoned opinion concerning the creation of second chambers for the separate Provinces of India, with special reference to your own Province.

8. Compare and contrast a federation with a confederation and give examples of both. Distinguish carefully between the two

main types of federation. Would you advocate a federal form of government for India? If such a form be adopted for India which of the two main kinds of federation would you prefer?

9. Write a detailed note on the membership, term of life and powers of both Chambers of the Indian Legislature. State carefully the extent to which the Governor General has the power to enact law against the wishes of the Legislature.

* 10. Write a note on the Origin of the State.

ECONOMICS—PASS

Third Paper—Indian Economics

1. Discuss the nature of the joint family in India, and explain its economic significance. What are the factors that tend to break it up in modern times?

2. How do you explain the survival of the cottage industries in modern India? What means would you suggest to improve their efficiency in the face of competition with the machine industries?

3. Discuss fully the drawbacks of Indian industrial labour. How far do you think it might be possible to counteract them? Indicate the lines of reform that you would suggest.

4. Discuss the importance of rainfall in India and indicate the factors on which the amount of rainfall depend.

* 5. What is Paper Currency Reserve, and what are its objects? Explain the form in which it is kept, and discuss how far the policy of keeping a part of it in London can be justified.

6. Trace the history of the amalgamation of the Presidency Banks into the Imperial Bank of India. What do you think have been the advantages of such amalgamation?

7. Is the land revenue in India a tax or a rent? Give reasons for your answer. In the event of your holding that it is rent, can you justify the theory of state land-lordism in India which it would necessarily imply?

8. State the regional distribution of the more important of the commercial crops of India. Indicate briefly the importance of such crops in the foreign trade of India.

9. State the circumstances in which you would decide to protect an Indian industry against foreign competition. What are the different methods by which you could do it? Discuss the relative merits of each.

10. Discuss the relative advantages of loans and taxes as methods of raising revenue. Illustrate your answer by special reference to Indian conditions.

ECONOMICS—PASS

First Paper—Political Economy

1. Comment on the following :—'Economic laws are essentially hypothetical' (SELIGMAN).

2. Consider whether the following should be regarded as capital :—(a) a surgeon's skill (b) savings accumulated in the form of a deposit at a savings bank, (c) Government of India War Loan, (d) money in circulation.

3. Indicate the advantages of large scale production.

4. How is value determined under conditions of (a) monopoly, and (b) competition ?

5. In what different ways is it possible to combine gold and silver in the currency system of a country ?

6. While changes in the price level...influence the rate of interest, it must not be forgotten that on the other hand changes in the rate of interest itself affect the general price level' (SELIGMAN). Discuss this statement.

7. In what sense is it true that imports must in the long run pay for exports ?

8. How far is it true to say that the theory of wages is an application of the general theory of value ?

9. Is it possible to abolish or to mitigate poverty by checking population ?

10. Define a tax. Explain and illustrate Adam Smith's first canon of taxation.

ECONOMICS—PASS

Second Paper—Political Philosophy

GROUP A

1. Criticize the contract theory of the origin of the State.

2. 'The safety of the State is its first law and to realise this end must be above morality'. Comment on the statement.

3. How far should the State initiate social reform ?

4. What arguments of political theory would you use in supporting or rejecting (a) communal representation, and (b) compulsory education ?

5. Discuss briefly the recent changes in the conception of Sovereignty.

GROUP B

6. Discuss the use and limitations of the party system. Answer with special reference to the conditions in the Indian Assembly.

7. Discuss the position of the Cabinet in England. To what extent has the Cabinet usurped the functions of Parliament ?

8. Examine briefly the claims of (a) functional, and (b) territorial representation in the modern state.

9. Examine clearly the relation of the Vicery, the Executive, and the Assembly in India.

10. Why is there special danger in India of the instruments of democratic control being captured and engineered by powerful interests ?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Discuss the economic effects of the joint family and caste systems in India. Would you advocate the abolition of these system ? Give reasons for your answer.

2. What are in your opinion the defects and difficulties of Indian agriculture ? What steps would you suggest for their removal ?

3. What do you mean by the monsoons in India ? Describe the various economic consequences which follow from their failure.

4. State the salient features of the Permanent and Temporary settlements in India, and discuss their merits and defects.

5. What led to the enactment of the Co-operative Societies Act of 1912 ? In what respects has this Act been an improvement upon the Co-operative Credit Societies Act of 1904 ?

6. State some of the striking economic and social effects that have followed from the construction of railways in India. Do you think that any further extension of the Indian railway system is desirable ?

7. Describe the chief features of India's foreign trade and account for the normal excess of her exports over her imports.

8. Do you think that it will be to the best interests of India that she should now be included in any scheme of Imperial Preference ? Give reasons for your answer.

9. Examine the arguments for and against the use of foreign capital in India.

10. Write notes on any *three* of the following :—

(a) Council drafts.

- (b) Reverse drafts,
- (c) The gold exchange standard.
- (d) Unlimited liability.
- (e) The Co-operative Agricultural Sale Society.

1932

ECONOMICS—PASS

First Paper—Political Economy

1. 'Political Economy is on the one side a study of wealth, and on the other, and more important, side a part of the study of man.' Discuss.
2. Water is more *useful* than gold; yet gold has a greater *market value* than water. How do you explain this paradox?
3. 'Broadly speaking, while the part which Nature plays in production conforms to the Law of Diminishing Return, the part which man plays conforms to the Law of Increasing Return,' Discuss
4. Is an increasing population always beneficial to a country?
5. Gas and coke are joint products. A duty of 10 per cent is imposed on gas. How will it affect the price of coke?
6. 'In the short run Labour and Capital are competitive; in the long run they are complementary.' Discuss this statement.
7. Explain the processes by which banks create credit. What is the effect of credit on prices?
8. 'Our imports are paid for by our exports.' Elucidate.
9. How is the value of money determined (a) internally, and (b) internationally?

ECONOMICS—PASS

Second Paper—Political Philosophy

1. Critically examine the Social Contract theory of the origin of the State.
2. Discuss the nature and sources of law.
3. What are the distinguishing marks of a federal union? How does it differ from (a) a federation, and (b) a unitary form of government?
4. What, in your opinion, is the proper sphere of the State? Do you justify what is popularly known in India as the Sarda Act? Give reasons for your answer.

5. Discuss the purpose and provisions of the Parliament Act. 1911.

6. The (British) Cabinet is a unit—a unit as regards the Sovereign, and a unit as regards the Legislature.' Explain this Statement, and briefly discuss in this connexion the position of the Cabinet in the English Constitution.

7. What is meant by the constitution of a country?

State how constitutional changes can be effected in England, France, and the United States of America.

8. 'The Indian legislatures are non-sovereign lawmaking bodies.' Examine this statement.

9. Discuss the position and powers of the Governor-General of India with special reference to his relation to his Executive Council.

10. 'The strict separation of powers is not only impracticable as a working principle of government, but it is not to be desired in practice.' Discuss this statement.

ECONOMICS—PASS

Third Paper—Indian Economics

1. Examine the possibilities of the handloom cotton industry in Bengal.

2. Discuss the arguments for and against the permanent settlement of land revenue in Bengal.

3. Examine the scope of co-operation in the field of Indian agriculture.

4. Discuss briefly the existing system of provincial finance in India.

5. Examine the composition and functions of the Indian Paper Currency Reserve.

6. Distinguish between direct and indirect taxes, and examine their merits and demerits.

7. Describe the various types of Banks that exist in India. Examine also the relation of the Imperial Bank of India to the State.

8. Examine the progress of Trade Union movement in India. Is the movement running on right lines?

9. Describe the main features of the Gold Exchange Standard as it operated in pre-war days.

10. Write notes on any two of the following :—

(a) The salt tax.

(b) The income tax.

(c) Treasury bills.

1933

ECONOMICS—PASS

First Paper—Political Economy

Candidates are required to give their answers in their own words as far as practicable.

1. Discuss the claims of Economics to be regarded as a science.
2. Indicate and compare the principles which determine exchange value under (a) competition, and (b) monopoly.
3. Discuss the advantages and weak points of (a) joint-stock companies, and (b) co-operative associations as systems of business management.
4. 'It makes really no difference whether we say that interest is the measure of marginal productivity or the measure of marginal forbearance'. (SELIGMAN). Explain and comment on this proposition.
5. Describe the conditions favouring a general high level of wages for all classes of workers in any country.
6. 'The quantity theory is only an elliptical way of stating the ordinary laws of demand and supply.' Explain this statement.
7. Discuss the various factors which influence the discount rate. What is the relation between the discount rate and the general interest rate ?
8. Indicate the objects for which bank reserves are held. Discuss the merits of the various ways by which the banks of different countries protect their reserves.
9. Examine the validity of the two following propositions :—
 - (a) 'Profits tend to an equality.'
 - (b) Profits tend to a minimum.'
10. Discuss the scope as well as the limitations of Trade Union action for raising wages.

ECONOMICS—PASS

Second Paper—Political Philosophy

Candidates are required to give their answers in their own words as far as practicable.

1. History without political science has no fruit ; and political science without history has no root.' Discuss this statement.
2. Discuss the constituent factors of nationality. To what extent do such factors exist in India ?
3. What is meant by the organic theory of the State ? Discuss the practical value of the theory.

4. Discuss the characteristics of Sovereignty. Are the Indian States and the British Dominions sovereign? Give reasons for your answer.
5. Estimate the strength and weakness of democracy as a form of government.
6. Do Upper Chambers serve any useful purpose? Would you like to have an Upper Chamber for Bengal in the proposed new constitution of India? Give reasons for your answer.
7. Describe, with reference to the constitutions of England and France, the salient features of the Cabinet system of government.
8. Compare the constitutional powers of the President of the United States of America with those of the British Prime Minister.
9. Examine the position and powers of ministers in an Indian province under the existing constitution of the country.
10. Discuss the relation of the Governor-General in Council with the Secretary of State for India.

ECONOMICS—PASS

Third Paper—Indian Economics

Candidates are required to give their answers in their own words as far as practicable.

1. Discuss the economic advantages and disadvantages of the caste system in India.
2. Discuss the forest policy of the Government of India. Examine the importance of forests in the economic life of the nation.
3. Examine the causes and effects of rural indebtedness in Bengali. Discuss the steps taken by the State to afford relief to the indebted agriculturists.
4. Write a short note on any *one* of the following :—
 - (a) Sources of power and their utilization in India.
 - (b) Foreign capital in India.
5. Examine the arguments for and against the State management of railways in India.
6. Describe the measures taken by the Government to protect the interests of tenants in Bengal.
7. Describe the main features of the Gold Exchange Standard. Show how it differs from the Gold Bullion Standard.
8. Discuss the effects of a policy of protection on Indian Industry. How does such a policy affect the agricultural population of this country?

9. Describe the main features of the Indian banking system.
 10. Describe the chief sources of revenue and the main heads of expenditure of the Central Government in India.
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1934

ECONOMICS—PASS

First Paper—Political Economy

Answer any six questions.

1. 'Economics is a study of men in the ordinary business of life.' Discuss this definition of economics and indicate the practical utility of the subject.
2. State the law of demand. Consider the effects of increased demand upon the price of (a) wheat, and (b) cotton goods.
3. How would you define the term 'capital'? Discuss if (a) the goodwill of a business, (b) patent right, (c) money in circulation, (d) the skill of a musician, are capital.
4. 'The problem of population is not one of mere size but of efficient production and equitable distribution.' Discuss.
5. Discuss the principle that regulates the value of joint products. What would be the effect of an increased demand for gas upon the price of coke?
6. State the conditions under which a factor of production can permanently raise its remuneration.
7. 'High wages and high prices do not necessarily go together.' Comment on this statement and bring out clearly the relation between wages and cost of production.
8. In what different ways can gold and silver be joined in the currency system of a country?
9. What is an economic crisis? To what causes can the present economic crisis be attributed?
10. Explain why the imports of a country must in the long run pay for its exports.

ECONOMICS—PASS

Second Paper—Political Philosophy

Answer any six questions.

1. 'As an explanation of the origin of the State the theory of the social contract is now entirely discredited.' Do you agree with this view? Give reasons for your answer.

2. What is meant by a non-Sovereign law-making body ? What are its characteristics ? Illustrate your answer.

3. What should be in your opinion the proper functions of a modern state ?

4. In what respects does the unitary form of government differ from the federal form of government ? Illustrate your answer.

5. What should be the proper relation between the representative and his constituency in a democratic state ? Should he be bound by the instructions of his constituents.

6. Describe the position and powers of the Crown in the British political system,

7. Discuss the effects of the Parliament Act of 1911 on the position and powers of the British House of Commons.

8. State what appear to you to be the outstanding features of the American Constitution.

9. Examine the nature of control that a Governor's Legislative Council can exercise over the expenditure of provincial revenues in India.

10. Describe the constitution, nature, and functions of the Executive Council of the Governor-General of India.

ECONOMICS—PASS

Third Paper—Indian Economics

Answer any six questions.

1. 'The problem of Indian agricultural development is mainly a problem of water supply.' Critically examine this statement and show what other factors are necessary for its development.

2. Discuss the arguments for and against the Permanent Settlement of land revenue in Bengal.

3. Examine the progress made by the Co-operative Movement in India. Discuss the part played by the State in this matter.

4. Examine the position of jute in the foreign trade of India. Estimate the importance of this commodity to the province of Bengal.

5. Discuss the possibility of developing cottage industries in Bengal. Would such an attempt, in your opinion, be successful ? Give reasons for your answer.

6. Discuss the arguments for and against the introduction of gold currency in India.

7. What should be, in your opinion, the suitable constitution for the Reserve Bank in India ? What functions should it ordinarily discharge ?

8. Compare the advantages and disadvantages of direct taxation with those of indirect taxation in India.

9. Carefully examine the nature of the public debt in India, and discuss how far it is economically sound or unsound.

10. How far, do you think, is the policy of the discriminating protection adopted by the Government of India justified? Discuss the economic effects of such a policy.

1935

ECONOMICS—PASS

First Paper—Political Economy

1. 'There is not any one method of investigation which can properly be called the method of Economics; but every method must be made serviceable in its proper place, either singly or in combination with others.' Comment on this statement, and bring out carefully the advantages and the limitations of the various methods for the study of economics.

2. 'Ricardo and his followers maintain that the value of a commodity is fixed by its cost of production; while Jevons and those that agree with them contend that value is fixed by its marginal utility.' Which of these two views is correct?

3. 'Interest is the measure of marginal productivity and marginal forbearance.' Discuss this statement.

The rate of interest on all loans is 2 per cent in the Calcutta money market, but a cultivator borrows at 18 per cent. How would you explain this difference?

4. 'Profits are the surplus of the intramarginal over the marginal producer.'

'Profits are a constituent element of the normal price.'

Are these two views about the nature of profits reconcilable?

5. 'The national dividend is at once the aggregate net product of, and the sole source of payment for, all agents of production within the country.'

What is national dividend, and on what principle is it distributed among the factors of production?

6. What are the causes of rent? Does rent enter into price?

7. 'The distribution of metallic money is in large measure the result of international forces.' Explain this statement.

8. How would you measure the variations in the purchasing power of money?

9. What are the limits within which the rate of foreign exchange can normally fluctuate? Are there any such limits to a regime of inconvertible paper money?

10. 'The assumption and ownership by Government of all means of production might cut deeper into the roots of social prosperity than appears at first sight'. Discuss this statement in the light of modern developments.

ECONOMICS—PASS

Second Paper—Political Philosophy

1. What are the essential factors that contribute to the development of Nationalism in a country?

2. What is meant by the Organic Theory of the State? How far is the theory sound?

3. Describe the characteristics of a true Federal Union? In what respects does such a union differ from a confederation? Illustrate your answer.

4. What is meant by 'law' in Political Science? Explain the sources of law.

5. What are the advantages claimed for the bicameral system of legislature? How far are they real? Should Bengal have a Second Chamber in the new Constitution of India? Give reasons for your answer.

6. Discuss the essential features of the cabinet system of government as it obtains in Britain.

7. Describe the position and powers of the Head of the Federal Executive in the United States of America.

8. Explain how constitutional amendments may be made in England, France, and the U. S. A.

9. Describe the structure of the provincial executive in a Governor's Province in India with special reference to the position of the Governor therein.

10. To what extent is the legislative control over the expenditure of the Central Government effective in India?

ECONOMICS—PASS

Third Paper—Indian Economics

1. Discuss the various impediments in the way of agricultural improvement in India. Suggest means whereby these obstacles can be removed.

2. Examine the present position of the handloom cotton industry in India. Suggest means for its improvement.

3. Describe the famine relief policy of the Government of India.

4. Examine in detail the actual and possible benefits of Co-operative Credit Societies in India.

5. Account for the causes of the industrial backwardness of the Indian people. What measures would you suggest for the rapid industrialization of the country ?

6. Account for the comparative inefficiency of Indian industrial labour. What measures would you suggest to improve the efficiency of Indian labour ?

7. Account for the absence of the banking habit among the people of India. What measures would you suggest to encourage this habit among the mass of the people ?

8. Discuss fully the economic effects of the employment of foreign capital in India.

9. Examine the main features of the Indian currency system.

10. Write notes on any **one** of the following :—

(a) The Gold Exchange Standard.

(b) Provincial finance in India.

1936

ECONOMICS—PASS

First Paper—Political Economy

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. Examine the causes that led to the expansion of business units.

2. What is meant by 'elasticity of demand' ? Consider its bearings on (a) taxation, and (b) monopoly profits.

3. Examine the arguments for and against state ownership of railways.

4. Discuss the functions and utility of trade unions.

5. Explain what is meant by 'mint par of exchange.' Examine the causes of the fluctuations of foreign exchanges.

6. Explain what you understand by inflation and deflation. Discuss the influence of an unbalanced budget on prices.

7. State and explain the relation between agricultural rents and agricultural prices.

8. What is Capital ? Discuss the conditions on which the supply of capital in a country depends.

9. What are the factors that determine the rate of interest ? Account for the recent fall in the general rate of interest.

10. Explain the statement 'imports pay for exports.'

ECONOMICS—PASS

Second Paper—Political Philosophy

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions only.

1. How do you define a state ? Do the following come under your definition of a State :—(a) Hyderabad (Deccan), (b) New York, (c) the League of Nations ? Give reasons for your answer.

2. In what respects does the unitary form of government differ from the federal ?

Are the governments of the following countries unitary or federal in form :—(a) Great Britain, (b) France, (c) the United States of America, (d) British India.

3. What, in your opinion, is the proper sphere of a modern state ?

4. What do you mean by democracy ? 'Whatever may be the weaknesses of democracy, and they undoubtedly exist, it seems destined to become universal.' Discuss this statement.

5. Write explanatory notes on the following :—(a) communal representation (as it obtains in India), (b) proportional representation, (c) indirect election, (d) the initiative and referendum.

6. What are the distinguishing marks of the presidential system of government ?

In what respects does this system differ from the cabinet system ?

7. Discuss the position and powers of the Crown in English constitution.

8. How is a ministry formed in France ?

How do you account for frequent changes of ministry in France ?

9. Examine the position and powers of the Secretary of State in Council in relation to the administration of India.

10. Describe the constitution and powers of the Executive Council of the Governor-General of India.

ECONOMICS—PASS**Third Paper—Indian Economics**

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. Examine how far the existing social system of India helps or hinders the economic progress of the country.
 2. Give an account of the chief mineral resources of India and point out their utility for its industrial development.
 3. Indicate the economic advantages and disadvantages of the permanent settlement of land revenue in Bengal.
 4. 'Over-population lies at the root of Indian poverty.' Do you accept this view?
 5. Indicate the chief causes of the indebtedness of the Indian cultivator.
 6. Give an account of the present position of the small-scale industries of Bengal. What measures would you suggest for their improvement?
 7. On what grounds has the policy of discriminating protection been adopted in India? Take any protected industry, and show how far the policy has been successful.
 8. Why was the Indian mint closed to the free coinage of silver in 1893? Was that policy successful?
 9. Describe the present organization of the Indian money market. What part is the Reserve Bank expected to play in this market?
 10. Describe the sources of revenue of the Central and Provincial Governments in India. Can you suggest a more equitable distribution of revenue between these two governments?
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1937**ECONOMICS—PASS****First Paper—Political Economy**

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. State and explain the law of diminishing returns as applied to agriculture.

2. Examine the influence of inventions and improvements in machinery on (a) the wages of labour, and (b) economic progress generally.

3. Discuss the importance of the element of time in the theory of value.

4. Distinguish between rent and quasi-rent, and examine the influence of progress on rent.

5. Define capital, and discuss its main functions.

6. Carefully examine the economic effects of rising and falling prices.

7. What do you understand by bimetallism? Examine its advantages and disadvantages.

8. Describe the various functions of a modern bank.

9. Discuss the various arguments in favour of free trade and protection respectively.

10. Carefully examine the various grounds on which the principle of progression in taxation is justified.

ECONOMICS—PASS

Second Paper—Political Philosophy

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. Examine the social contract theory regarding the origin of the State. Is the theory entirely valueless?

2. What are the forces that tend to create a nation? How far are these forces operative in this country to-day?

3. Discuss and illustrate the conditions necessary for the success of a federal union. How far do they exist in India?

4. 'The sole duty of Government is to protect the individual from violence and fraud.' Discuss this proposition.

5. 'The distinction between States with written and those with unwritten constitutions is an illusory basis of division.' Examine this statement.

6. Describe the composition and functions of the House of lords.

7. In what respects does the parliamentary system of France differ from that of England?

8. Discuss the power of the judiciary in relation to the Acts of the Legislature in England, the U. S. A., and India.
9. Examine the nature of popular control over central revenue and expenditure in India.
10. Describe the salient features of the new Constitution of India.

ECONOMICS—PASS

Third Paper—Indian Economics

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. Describe the important features in the social structure of the people of India.
 2. Give an account of the various types of irrigation works in India, and indicate their economic importance.
 3. What are the changes that railways have produced in the village economy of India?
 4. What industries owe their existence of development to the foreign capital in India? Would you encourage its use? Give reasons for your answer.
 5. How would you account for the low efficiency of Indian industrial labour? What are your suggestions for remedying this inefficiency?
 6. Describe how credit is supplied in India to (a) the agriculturist, and (b) the trader.
 7. What are the different types of banks we have in India? What part do the exchange banks play in financing our trade?
 8. Describe the systems of land tenure prevalent in India.
 9. Give a descriptive outline of the currency system prevailing in India during 1893—1917.
 10. Analyse home charges, and explain how they are met through the operations of trade and commerce.
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Calcutta University

B. A. PAPERS

1909

PHILOSOPHY—PASS.

First Paper—Psychology

Paper-setters { Dr. G. Thibaut, C. I. E., Ph. D., D. Sc.,
Rev. A. B. Wane, M. A., B. D.,
Babu Binayendra Nath Sen, M. A.,

1. Mention any Psychological law that you know of, and clearly explain the method by which you would establish or prove that law.

2. How do you distinguish mental and physiological disposition from mental and Physiological processes? Give examples. How would you show that there is a correlation between the two order of dispositions?

3. What do you understand by the distinctive character of sensation? Which of these characters contribute to our perception as Time and Space respectively? Show how such perception is developed.

4. Distinguish between :—

(a) Unity of consciousness and unity of Attention—process.

(b) Total and Relative Inattention.

(c) Spontaneous and Voluntary attention.

5. What exactly do you mean by an “External Reality”? Explain clearly the nature of the processes that give rise to the perception of the independent reality of material things.

6. Distinguish between an impression, an image, and idea. What do you understand by different types of mental imagery? Describe what sort of images are called forth in your mind as you read the following :—“I come to bury Caesar, not to praise him’.

7. State and illustrate the different Forms of the Association of Ideas. Can you reduce them to one fundamental law?

8. Explain and illustrate the processes of Abstraction, conception, and Ideal construction.

9. Set forth in your own words the idea of the world that you have in your mind. Can you show that the conception of Law has helped in the elaboration of that idea?

10. On what basis are emotions characterised as primary and derivative? How would you characterise Pity from this point of view? What is its relation to Sympathy?

11. Expound the view that "Sentiments are Dispositions, not Actual feelings." Give an analysis of the sentiment of 'Love of country.'

12. What is the relation of Conation and feeling-attitude? Explain Darwin's view of Emotional gestures.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Explain the term positive, normative and practical as applied to Ethics as a science. Discuss the suitability of each.

2. What are the sciences that Ethics rests upon, and what other sciences depend upon Ethics for part of their data? Explain the relation in each case.

3. Characterise the object and process of moral judgement and distinguish them from the object and process of prudential judgement.

4. Examine the view that the Freedom of the will is a postulate of moral judgement.

5. Give a classification of the springs of action on a psychological basis. What, in your opinion, is the process by which their place is determined in a well-ordered moral life?

6. Is there any place for Conscience as distinguished from Prudence in a system of Hedonism?

7. What is the explanation given of moral obligation from the point of view of Evolutionary Ethics.

8. "Some laws express what is, some what must be, and some what ought to be." Illustrate this. Under which of these categories Moral Law fall, and how? What is the relation of Moral Law to Divine Law and Political Law?

9. Explain Bentham's classification of the so-called Sanctions of Morality and the improvement introduced into it by Mill.

10. Can you distinguish Egoism as a philosophical theory from selfishness in practical conduct? Is either ethically justifiable?

11. Explain fully your idea of an organism. In what sense and to what extent is the analogy of an organism applicable to human society?

12. Can you give an illustration of a Conflict of Duties? Can each of the conflicting elements in such a case be properly called a Duty? What is the Ethical solution for such a conflict?

PHILOSOPHY—PASS**Third Paper—General Philosophy**

Only six questions are to be answered.

1. Distinguish between the mechanical and the teleological views of Evolution. What is the rational necessity under which we like to take the latter view ?

2. There was a time when men drew no distinction between different kinds of knowledge. How did they come to discriminate Philosophy and Science from the knowledge of the common man ? and why do they discriminate Science and Philosophy ?

3. What is Space ?

4. State what seems to you to be the most satisfactory account of the relations of mind and body ; discuss in particular the question of reciprocal causality.

5. Give a brief account of the relation in which you consider man to stand to God,—man being regarded on his physical, rational, and moral sides.

6. "There is nothing in the intellect which was not first in sense." Examine the statement.

7. How does the relativity of knowledge affect its validity ? (Make plain the meaning of the terms employed).

8. Write single paragraphs on six of the following terms :—

Immanence, Sub-specie alternitates ; dialectic ; pluralism, reality ; criticism ; the ethos ; ontology.

1910

PHILOSOPHY—PASS**First Paper—Psychology**

1. Point out the place of Psychology, in the scheme of sciences. Explain the methods of psychological inquiry.

2. Explain what you understand to be the exact connexion between nervous and physical phenomena. Estimate the importance of Experimental Psychology.

3. Define Consciousness, and distinguish it from Sub-Consciousness and Self-Consciousness.

Explain the relation of Attention to Consciousness.

4. Discuss the nature of sensation, with special reference to (a) Organic Sensation, (b) Muscular sensation. What do you understand by the Extensity of Sensation ?

5. Show how mental development depends on the principle of retentiveness. Explain the phenomena of nascent revivals and indicate the exact point of their distinction from free or explicit revivals.

6. In what respects does an object as merely imaged differ from the same as actually perceived? Indicate the part played by the Gentic Image in mental development.

7. Discuss fully the nature and grounds of *Belief*.

8. Explain *Feeling*. Discuss the biological significance of *Feeling*. Trace in brief the progress of emotive development.

9. Point out the characteristics of Reflex and Instinctive actions. Show what factors they contribute to the development of Conation. Examine in this connexion the importance of Heredity and Experience.

10. What do you understand by Will? Analyse the consciousness of Freedom and explain its bearings on (a) Education (b) Deliberation.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Define and distinguish the meanings of the term law as applied in Natural Science, Jurisprudence, and Ethics.

2. Ethics is the science of the conduct of man as a social being. Write a brief exposition of this.

3. Discuss the value of the historical method as applied to Ethics showing the bearing on this of Aristotle's dictum 'First in time, and first in the nature of things'.

4. What are the main psychological divisions of the mental activities? Show how by different ethical theories different relative importance is attached to these. How in your opinion ought weight to be laid on each of these divisions?

5. Why is it necessary for ethics to have both a psychological and a metaphysical basis? To what defects are ethical theories liable which neglect either of these?

6. Give an account of the nature of the moral judgement showing wherein it differs from the logical judgement. What are the objects with which it may be said to be concerned, and to what controversy has this led? State your own opinion on this.

7. Explain what is meant by moral judgements? What in your view are the main factors to be considered in a theory of rewards and punishments?

8. What contributions have the rational and the evolutionist

schools made towards the advancement of ethical science? How may the study of theories be said to bear influence on the practical life?

9. What ethical schools have employed physical or chemical analogies in establishing their theories. Why are those analogies to be rejected in favour of the biological analogy?

10. Give a brief account of the development of the moral law in the life of the individual describing the various stages through which it passes.

11. How is the existence of the state to be justified ethically? What are its ethical functions and wherein ought its action to be limited.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Mention any two problems of philosophy that you feel specially interested in, and give a reasoned statement of your solution of these problems.

2. Show that in the development of philosophical thought there is a natural transition from Dogmatism to Scepticism, and from Scepticism to Criticism.

3. 'All knowledge begins with experience, but all knowledge is not derived from experience.' Fully elucidate contents of this proposition.

4. What is your conception of matter and how do you apply that conception to an explanation of the constitution of the world?

5. Explain the distinction that is made between the empirical and the noumenal self. What do you consider to be the true doctrine of self?

6. What is your idea about Creation? What place do you give in it to the Spencerion doctrine of evolution?

7. What is your idea of the Infinite? Can you explain how you got that idea, and what place it occupies in your views about Nature and Man?

8. How would you reconcile the presence of death, evil, and sin with the moral government of the universe?

9. Give a simple exposition of any two of the following philosophical doctrines :—Realism, Idealism, Monism, Dualism, Pluralism.

PHILOSOPHY—PASS**First Paper—Psychology**

1. Of what use is a knowledge of physiology to the psychologist ? Is a knowledge of psychology of any use to the physiologist ? How does a study of mental pathology assist the student of psychology ?

2. As you are writing a fly settles on your face ; you have your hand and drive it away, but do not pause in your writing. Make out a list of the physiological and psychological processes involved. What difference would it make in your list if, instead of acting as above described, you are to pause and deliberately brush the fly away.

3- Describe the part played by the Muscular Sense in our acquisition of a knowledge of the external world. Illustrate your answer by reference to your perception of the examination hall in which you are writing and the objects it contains.

4. What is meant by kinds of Memory ? Describe the kind of Memory you have yourself. Would you call yours a good memory ? If so, why ? If not, why not ? How would you proceed if you wished to improve it.

5. State and illustrate the scientific uses of the Imagination.

6. How would you define the relation between Emotion and Intellection. Consider in this connexion whether it is true that thought is most affective when feeling is most completely in abeyance. How is Feeling affected by the development of Intellection ? How would you distinguish between Sensation and Sense-Feelings.

7. Write a note on the Aesthetic Sentiment, its characteristics, constituents, and development.

8. Explain the nature and working of Instinct and Habit and the place they occupy in the process of mental development.

9. Analyse at length the process which culminates in Choice.

PHILOSOPHY—PASS**Second Paper—Ethics**

1. What do you understand to be the scope of Ethics. Explain its relation to—

- (a) Psychology.
- (b) Metaphysics.

2. Wherein does an action become moral ? Indicate the

place of desire in Ethics. Explain Universe of Desire, and show its bearing on moral life.

Or, Discuss the basis of moral obligation. Explain in this connection the value, if any, of internal and external sanctions.

3. Explain and criticise the doctrine of the greatest happiness of the greatest number. What is meant by quality of pleasures, as distinguished from quantity? Discuss the validity of the distinction.

Or, Discuss the leading ethical standards. Point out any special excellence that in your opinion characterises any of them.

4. Explain clearly the respective claims of Egoistic and Universalistic Hedonism. Are the two capable of reconciliation?

5. Give a critical exposition of Kant's view of the Moral Reason. It has been said that "the idea of a categorical imperative lands us in sheer emptiness." Discuss this proposition.

6. Write short critical notes on the following :—

- (a) The Freedom of the Will.
- (b) The Paradox of Hedonism.
- (c) Evolution and its application to Ethics.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. What do you understand by the analysis of experience? Show how the classification of the sciences is based upon such analysis.

2. Give a full analysis of the Notion of substance and explain its relation to Quality.

3. Carefully distinguish between the mechanical and the teleological conception of Nature.

4. Clearly expound the Atomic Theory of Matter. Would you accept this theory as an ultimate explanation of matter and of the world?

5. Is the world finite or infinite? How do you define and form your idea of the Infinite and what is the proper significance of the idea?

6. How do you differentiate Mind from Matter. Clearly set forth the process by which we come to know of our own mind and of others minds.

7. Explain the theories of Interaction and Parallelism in connexion with the relation between Mind and Body. Which theory appears to you as preferable and on what grounds?

8. 'The object of knowledge is always a fact.' Where, how, and

when, does Error come in? Elucidate the points involved with illustrations.

9. The chief axiom of religion is: The world as a whole deserves our absolute reverence! Elucidate this axiom.

1912

PHILOSOPHY—PASS

First Paper—Psychology

1. What is Introspection? How is it related to other modes of obtaining psychological data?
2. Examine the nature of the aid which Physiology and Psychology are capable of rendering to one another.
3. State and explain briefly the Weber-Fechner Law of Sensations.
4. Explain briefly the significance of 'Retentiveness,' 'Association' and 'Acquirement of Meaning' as Primary Laws of Thought.
5. Define Perception and discuss whether we need other data than 'sense-experience' to enable us to perceive things.
6. Explain the term 'Conscious activity' and apply the conception to (a) Sensations, (b) Percepts, (c) Images, and (d) Ideas.
7. Analyse Desire and show how it is distinguished from other mode of Conation.
8. Describe the difference between the mental processes of a person telling a story well bringing out only essential points, and of a person who in telling a story mentions every irrelevant details.
9. Explain the nature and formation of Habit and its relation to Instinct.
10. Trace the stages in the development of 'Self-Consciousness'.
11. Give the general characteristics of Emotions, and in the briefest manner analyse your emotion should you suddenly find a lion walking into the examination hall in your direction.
12. Distinguish between Belief and Imagination, and point out the special features of 'primitive belief.'

PHILOSOPHY—PASS

Second Paper—Ethics

1. Briefly indicate the main psychological question that have a bearing upon ethical problems. Explain the relation between the two.
2. Fully elucidate what you consider to be the sound view about Conscience.

3. Discuss Mill's answers to the following objections to Utilitarianism :—

(a) Pleasure is a mean and grovelling object of pursuit.

(b) Happiness is a thing unattainable, and renunciation is the first condition of all nobleness of character.

4. What, according to Utilitarianism, is the Internal sanction of Morality ? Fully describe its nature. Is Utilitarianism justified in setting up such a sanction ?

5. Reproduce, with brief comments, Martineau's ethical classification of the springs of action.

6. What explanation is given by Evolutional Hedonism of (a) the sense of moral obligation ; (b) the relation between Egoism and Altruism ?

7. Give a critical exposition of the characteristic historical forms of Extreme Rationalism.

8. Define Personality, and give simple exposition of the Ethics of Personality.

9. Write an illustrative and expository note on the following : A manifestation of the law of moral progress is found in the gradual subordination of the sterner to the gentler virtues.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Elucidate the meaning of the following—'Science is an interpretation of the world within and without us. Philosophy is an interpretation of that interpretation.'

2. 'There is nothing in the mind which was not previously in the senses.' Criticize this statement as a doctrine of the origin of knowledge.

3. What do you understand by the principle of conservation of energy ? Is it an *a priori* or an *a posteriori* principle, and why ?

4. How does mental causation take place ? Explain the following :—The Ideal psychology must be physiological.

5. Give a philosophical explanation of the ideas of Substance, Self and God.

6. Give an analytical exposition of modern materialism and criticize it as an ontological doctrine.

7. What is Pluralism ? Distinguish between its Theistic and Atheistic varieties, and discuss the relation of each to Pantheism.

8. Discuss the question as to whether the world that we know is real or only phenomenal. Explain carefully what you mean by *real* in this connection.

9. The world is for us not a mere succession of events in necessary order; it has character. The world is the revelation to us of God. What is the proof, and what are the philosophical implications of the above?

1913

PHILOSOPHY—PASS

First Paper—Psychology

1. Define as clearly as you can the relation of Psychology to the Special Sciences and to Philosophy.

Or, Describe in detail the functions of the nerves and the nerve-centres.

2. How would you state the relation between psychical and physical phenomena?

Emphasize the fundamental difference of the one from the other without failing to show their close and intimate connexion.

Or, Mention and examine the various metaphysical hypotheses proposed to explain the correlation of Mind and Body. Which one of them would you support yourself? State your reasons.

3. Distinguish clearly between a Percept and a Representation. What are the main conditions of the Retention and Reproduction of Percepts?

Or, Describe the different stages of the perceptual process and show, by the analysis of the special case, that all perception involves both presentative and representative elements.

4. Define Feeling, and state its characteristic features as distinguished from Cognition and Volition.

Or, Distinguish between Sense feelings, Emotions, and Sentiments.

5. Give a full exposition of the formation and psychological function of General Names.

What different views have been held as to the relation of 'Experience' and 'Reason' in the development of Knowledge.

6. Distinguish between general and special sensibility, and explain the local character of sensations. State the law governing the relation of degree of sensation and force of stimulus.

Or, On what different principles has the distinction between Primary and Secondary qualities been based? What part has the distinction played in systems of philosophy?

7. Distinguish carefully between Reflex actions, Voluntary actions, Spontaneous actions and the actions of emotional expression.

Or, Describe as fully as you can Habit as a psychological principle. Show how the processes of voluntary movements are affected by habit, and explain the relation of Habit to Development.

8. Describe the nature of Instinct and the transition from instinctive to voluntary movement. Give a psychological analysis of the state of Desire and distinguish between Desire and Motive.

Or, What is the question involved in the controversy regarding Free-will? Describe the two views held. Which one would you favour yourself? Give your arguments.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Write short notes on any five of the following:—The Normative Sciences, The relation between Virtue and Knowledge, Casuistry, The paradox of Hedonism, Bentham's Sanctions of Morality. The "characteristics" of Shaftesbury, Aristotle's definition of Virtue.

2. Write notes, explanatory or critical, on any three of the following statements:—

(a) It is curious that psychological ethics are altogether peculiar to Christendom.

(b) No reason can be given why the general happiness is desirable, except each person, so far as he believes it to be attainable, desires his own happiness.

(c) Revenge is a kind of wild justice.

(d) He who is unable to live in society, or who has no need to do so because he is sufficient for himself, must be either a beast or a god.

(e) Act only on that maxim which thou canst at the same time will to become a universal law.

3. Illustrate the close relation between the science of Ethics and Politics in Greek thought. In what ways has the modern wider conception of the State influenced ethical thought?

4. Is it possible to justify the infliction of punishment on ethical grounds?

5. There is nothing just or unjust which does not change its quality with a change of climate. Three degrees of latitude overturn the whole science of law' (*Pascal*). To what extent is morality absolute and independent of the environment?

6. Indicate thought has followed in England since the middle of the nineteenth century.

7 Give a brief historical account of the development of Utilitarian Hedonism in England.

8. Is it possible to classify the virtues? What principles must be followed in attempting such a task? How far is the Platonic classification suitable to the circumstances of modern times?

9. Examine the part played by custom in the development of the moral life of (a) an individual, (b) a people. In what degree is the law, whether customary or written of a people a reliable indication of moral outlook?

10. Examine J. S. Mill's account of the connection between justice and utility.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Explain the difference between the Dogmatical and the Critical Methods in philosophy. Name and give some account of any leading dogmatical and any critical thinker, explaining clearly in what their dogmatism consists.

2. Distinguish between *a priori* and *a posteriori* in reference to knowledge. Give examples of principles often held to be *a priori*. Is it possible to explain the principles you give in the *a posteriori* way? Discuss the relation and relative importance of Experience and Reasons as factors of Knowledge.

3. What do you consider to be the most adequate meaning of the term substance? Must we assume that there is but one substance, or that there are more than one? Classify philosophical systems according to the views regarding substance on which they are based.

4. Explain fully the apparent difference between a Machine and a living Plant or Animal. Do you think that Organic Life is merely a more complicate form of Mechanism (physical and chemical) or do you think that it involves something essentially new and different? Give your reason.

Or, Explain the meaning of Evolution in nature and give reasons why many think that nature must be explained by some theory of Revolution. Explain the difference between the Mechanical and Teleological theories of Evolution, which of these theories do you consider to be the more adequate, and why?

5. Explain what you consider to be the principal difference between the minds of animals and the human mind. Do you consider it possible that the human mind, as it is at present, can have

been derived by a process of development from such mind as we see in animals? Give your reasons.

Or, Explain precisely what you mean when you speak of your "self". What reasons have you for speaking of your "self" as a permanent reality? How can you reconcile the permanent reality of your 'self' with the changes which you are conscious of as going within it?

6. What is meant by the Absolute? What is meant by saying that God is the Absolute? Has God ever been conceived as other than Absolute? Do you consider non-absoluteness to be really consistent with the idea of God? Give your reasons.

Or, What is meant by saying that God is "Transcendent" and by saying that God is "Immanent?" What different forms of theology does this distinction lend? State your own conclusion as to the Transcendence or Immanence of God, giving your reasons.

1914

PHILOSOPHY—PASS

First Paper—Psychology

1. Distinguish a *theoretic* science from a *practical* Science. Name the practical sciences, founded upon Psychology, and explain their relation to it.

2. What is the scope of Physiological Psychology? What reasons are there for holding the brain to be the chief organ of the mind?

3. In what senses may the term 'mind' be used? What is Consciousness? What are the conditions on which it depends, and what is its position among the mental faculties.

4. Discuss critically the threefold divisions of mental phenomena into those of Feeling, Intellect and of Will, with a view to show whether in your opinion the division is extensive and ultimate.

5. Explain what you mean by the 'psychology of cognition'. Explain the nature of Introspective Analysis, and analyse the process of Psychical elaboration, illustrating the operation and interdependence of several factors.

6. How do you account for the superiority among the sense of Touch and Sight as sources of Knowledge? What is Muscular Consciousness? What are its constituent factors.

7. State the characteristic features of feeling as distinguished from Cognition and Volition.

8. Show that emotions have a mental and a bodily side, and discuss the relation between the two. How are Emotions to be classified ?

9. Define Attention. Illustrate the use of Attention (*a*) as a fixing and (*b*) as a transferring force. Examine the relation of Attention to Consciousness.

10. Explain how the power of self control is gradually acquired and how it operates within the spheres of actions, feelings, and thoughts.

- 11. Give a psychological account of the nature of Character.

PHILOSOPHY—PASS

Second Paper—Ethics

1. What do you consider to be the practical value of the study of Ethics ? Discuss briefly the view that Ethics must either be based on a perfect self or on Religion.

2. A modern writer has said :—‘The origin and end of all philosophy is to be sought in Ethics’. Explain and discuss this statement.

3. Write short critical notes on any *two* of the following subjects :—(*a*) Teleological Ethics (*b*) Intuitionism, (*c*) Universalistic Hedonism, and its compatibility with Egoistic Hedonism.

4. What do you consider to be the proper object of the Moral Judgement ? Give a reasoned answer.

5. Discuss the question as to how far Hedonism in any of its forms can be regarded as furnishing an adequate basis for moral obligation.

6. Discuss the relation of conscience to the Social System.

7. State the problem raised by the apparently conflicting claims of individualism and Socialism, and indicate the lines on which you would attempt solution of its difficulties.

8. Consider the relative claim of (*a*) The Ascetic Life ; (*b*) The Contemplative Life ; (*c*) The Active Life : to be regarded respectively as the Ethical Ideal, in so far as they may be distinguished from each other.

9. Explain the moral significance of the following sayings (*a*) ‘Know thyself,’ (*b*) ‘Be a person,’ (*c*) ‘Whosoever shall seek to save his life shall lose it, and whosoever shall lose his life shall preserve it’.

PHILOSOPHY—PASS**Third Paper—General Philosophy**

1. Indicate briefly some of the characteristics of ancient Greek or ancient Hindu metaphysics. How far may these characteristics be explained by the political or civic environment of the time?
2. What is meant by Causation? On what does the possibility of defining it depend?
3. What is meant by 'innate ideas'? Give briefly the arguments for and against their existence.
4. Since seventeenth century the two rival philosophical theories have led to these two conceptions concerning the relation of body and soul. I mean the theory of *interaction* and the theory of *occasionalism* or parallelism.
5. How does the mind acquire knowledge of the external world? On what does the completeness of that knowledge depend?
6. Explain what is meant by 'theism'. Enumerate the theistic arguments known as the proofs of the existence of God and examine any one of them in detail.
7. The ethical systems of ancient philosophy are all alike intellectualistic. It is not until the advent of Christianity that the ethics of feeling begins to assume definite form. (Kulpe). Elaborate these statements.
8. How far can materialism offer a satisfactory explanation of the universe?
9. Explain what is meant by the theory of evolution. Within what limits is the law of evolution applicable?
10. Write short notes on the meaning of *any six* of the following :—aesthetics, conservation of energy, the mechanical theory of the universe, substance, empiricism, ontology, positivism, phenomena, necessity, and objectivism.

1915**PHILOSOPHY—PASS****First Paper—Psychology**

1. Give an account of the structure and working of the Nerves in general; and distinguish the principal classes of Nerves according to the functions performed by them.

2. Distinguish and explain the different methods of studying Mind, showing the use and necessity of each. Why and how far is Psychology necessary to the study of Mind ?

3. (a). **Either**, Explain the nature and use of Sensation in general, explaining how Sensations are produced. Classify the Sensations and show which of them contribute most to knowledge of the world, and why, giving illustrations.

(b) **Or**, Sketch the structure of the Human Ear, showing how Sensations of sounds are produced ; and distinguish the different qualities of Sound, explaining how they are produced.

4. Suppose that you perceive a palm tree about a mile distant from yourself : explain (a) how you know it to be an object external to yourself ; (b) how you know it to be a palm tree ; and how you know it to be about a mile distant.

5. Distinguish and explain the processes of Retention, Representation, Recognition, and Recollection. Analyse the process which goes on in your mind when you are writing an answer to a question.

6. (a) Explain the nature of Imagination, and exhibit its applications and uses in Science and Art.

Or, (b) Explain the nature of Emotion, showing how Emotion rises in the Mind, and how it differs from Sensation giving examples. A thunder-storm produces in the Mind the feeling of Sublimity : is this feeling an Emotion or a Sensation ? Give your reason.

7. (a). Explain the nature of Instinct, exhibiting its relation to Reason and Volition, and giving illustrations from animal life. Are there any instincts in human life ? How do Habits differ from Instincts ?

Or, (b) Explain the process of Deliberation, exhibiting its relation to Desire and Volition. What kinds of action are performed without Deliberation ? Does Deliberation imply Freedom of will ? Give your reason.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Discuss the question whether the Good or the Right constitutes the fundamental notion of Ethics,

Or, Explain and illustrate the relation of Ethics to Sociology and Politics. Examine the view that Ethics is merely a branch of Sociology

2. Discuss the nature of Instinct. Distinguish between Desire

and Motive, Motive and intention. Determine the meaning of Motive in Ethics.

Or, Classify the springs of Action and determine their mutual relations. On what grounds is superiority claimed for the Judgments of Duty ?

3. Show how the question as to the nature of the Ethical End is connected with the question as to the nature of the Self.

4. What is the meaning of Kant's dictum 'you ought and therefore you can' ? It has been said that the idea of self-determination combines the Liberatorian and the Determinist theory. Examine this statement.

5. Dwell on the following points :—(a) the relation conceived to exist between the individual and society ; (b) the facts supporting this conception ; (c) the sense in which the end is to be regarded as a personal one.

6. Outline the leading features of Intuitionism as an ethical theory, noticing the difficulties alleged to be involved in it.

Or. What account does Evolutionary theory as applied to Ethics give of the genesis of Conscience ? Do you think it possible to conserve the objective character of the authority of Conscience on the basis of this theory ?

7. Fully expound the moral theory according to which the highest good lies in the realization of the highest self.

Or. 'Each of the various ethical theories has contributed some valuable element to the whole of Ethical Thought.' Discuss this statement.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Discuss the scope and standpoint of Philosophy.
2. Explain and examine the distinction between the primary and secondary questions of matter.
3. What do you consider to be the chief defects of materialism as an ontological theory ? Is it possible to establish a system of morality on materialism ?
4. Take any *two* philosophical problems and discuss their solution from the idealistic standpoint.
5. State and examine the doctrine that all knowledge is relative.

6. What reasons have you for believing in the personal identity of the human soul ?

7. State and examine arguments for and against the doctrine that the world has an end.

8. Discuss the place of faith in our life. How would you distinguish faith from knowledge ?

9. Write short notes on the following ;—subjective idealism, parallelism, empiricism, optimism. and pessimism.

1916

PHILOSOPHY—PASS

First Paper—Psychology

1. State concisely the grounds on which psychology has been regarded as distinct from a philosophy of mind.

2. The mind is an organic unity, and its activities have the close interdependence and interaction.' Explain fully and illustrate.

Or, What are the physiological conditions of sensations. Distinguish them from those of perception. Describe Fechner's method of measuring sensibility, explain his law of the relation of sensation to stimulus.

3. Distinguish between a Percept and a Representation. What are the general conditions of the Retention and Reproduction of Percepts ?

4. What is the nature of knowledge ? Discuss the conditions of knowledge in their bearing upon the problem of an external world.

Or, What are the grounds on which feeling is treated as a separate function or faculty of mind ? Are they valid ?

5. Characterize those higher forms of volitional activity by which the conflict of Impulses is checked. Indicate the sphere and the limitations of the volitional control of thought and feeling.

6. Indicate the difference between the logical and psychological view of thinking. Describe the process by which concepts are formed.

Or, Show how pleasure and pain influence the Will. Is the theory that pleasure and pain is the only motive tenable ? Base your answer on a strictly psychological account of Desire.

7. Describe psychologically our ideas of Self and 'Externality.'

Or, Show how (a) Visual Perception develops independently and (b) how it combines with Tactual Perception.

PHILOSOPHY—PASS**Second Paper—Ethics**

1. Define Ethics and point out its relation to Psychology.
Or, Indicate the uses of the study of Ethics.
2. Explain the nature and conditions of moral Judgement. Has it any moral quality ?
Or, Determine the character of the moral Faculty and its place in the human constitution.
3. Distinguish Duty, Obedience, and Virtue. Point out the conditions of Duty.
Or, Determine the conditions and limits of Moral Responsibility. Is a servant responsible for what he does at the bidding of his master ?
4. Is Hedonism identical with Utilitarianism ? Give a critical estimate of the utilitarianism of Mill.
Or, How has the utilitarianism of Bentham been modified by Mill, and that of Mill by Spencer ?
5. Distinguish between Motive and Intention. Which of them determines the moral quality of an action ?
Or, Was St. Crispin right in stealing leather to make shoes for the poor ?
6. Examine the doctrines—(a) Might is Right and (b) Right is Might.

PHILOSOPHY—PASS**Third Paper—General Philosophy****GROUP A**

1. Explain the meaning of Epistemology, and the relation between Epistemology and Philosophy in general showing why Epistemology is necessary.
2. Explain the meanings of *A posteriori* and *A priori* in relation to knowledge with full illustrations. What thinkers considers knowledge to be wholly *A posteriori* ? Do you agree with them ? Give your reasons.
3. Explain the meanings of and the differences between Unconditioned and Conditioned, Absolute and Relative. The World, the Soul, God : are these Conditioned or Unconditioned ? Explain your meaning and reasons fully.

4. State clearly the principal Hypotheses with regard to the relation between Mind and Body ('the physiological and the the psychical series'). Which of them do you consider to be the most satisfactory and why?

GROUP B

5. Explain the nature of Mechanism, giving illustrations; and explain fully the difference between a Machine and Living Organism.

6. What is meant (in natural science and philosophy) by Species? What different opinions have been held with regard to the nature and origin of Species? On What reasonings are these opinions founded?

7. When you say 'I will do it myself,' what precisely do you mean by Self? Are there any other senses in which the word 'Self' is used? Explain and illustrate your meaning fully.

8. What is meant by Pluralism (in Philosophy), and by a Pluralistic theory of the world? Can the theory of the 'Pluralistic Universe' be reconciled with the Idea of God? Explain your meaning fully.

1917

PHILOSOPHY—PASS

First Paper—Psychology

1. (a) 'Brain and Mind'; describe briefly the structure of the Human Brain, and explain the relation between Brainwork and Mind-work, giving illustrations.

Or, (b) 'Judgement and its Categories': explain the nature of Judgement analysing any example. What is meant by Categories of Judgement? What do you consider to be the fundamental Categories? Give examples.

2. **Either**, (a) Define three fundamental 'element' or 'factors' of mind and as a whole, and show clearly their relation to one another with illustrations.

Or, (b) Define Emotion and analyse any example of Emotion showing how it arises, and explaining its connection with the organism.

3. Explain fully how you know the existence (a) of a material world, and (b) of other mental beings like ourselves.

4. Explain the nature of Expectation, analysing an example fully, and show in what points it differs from Memory and from Constructive Imagination, illustrating your meaning with examples.

5. Explain the nature and origin of Habit, and exhibit clearly the points of difference between Habit and Instinct with illustrations.

6. Define Volition, and analyse a concrete example, exhibiting the different elements included. What is meant by Freedom of Volition ?

PHILOSOPHY—PASS

Second Paper—Ethics

1. What is the proper subject-matter of Ethics ? How is Ethics related to Politics ?

2. Distinguish between Conscience and Prudence, and determine their relative place in the human constitution.

Or. Distinguish between Duty and Merit. How are degrees of Merit to be estimated ?

3. What do you understand by 'Conflict of Duties ? How should an individual act in such a case ?

Or. Indicate the character and course of Moral Progress. Is it consistent with the Intuitionist Theory of Morals ?

1. Give a critical account of the Moral Standard advocated by any *one* of the following writers :—(a) Bentham, (b) Bain, (c) Martineau.

5. Distinguish between Natural and Moral Evil. Are they connected in any way ?

Or. Distinguish between Hedonism and Eudaemonism, and estimate their relative values as moral theories.

6. Explain the relation of the Individual to Society and point out the importance of the relation in morals.

Or. Determine the character of volition, indicating its relation to Desire and Motive.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Give a detailed critical exposition of Realism and Idealism as metaphysical doctrines.

2. Discuss critically the problems of 'Transcendence' and 'Immanence' in their bearings upon the questions of Ethics and Theology.

3. What is the place of 'Self' in Reality, and how is the Finite Self related to the Absolute Self ?

4. What is your conception of Immortality ?

5. What is Epistemology ?

Discuss the theories of the Methods and Limits of Knowledge.

6. Examine critically whether Materialism can be accepted as an adequate and satisfactory view of the Universe.

7. Discuss in detail the Mechanical and Teleological view of the Universe.

8. Explain fully the relation of Philosophy to the Sciences.

9. Write short explanatory notes on the following :—category, automatism, epigenesis, noumenon, truth, pragmatism, dialectic, monism.

1918

PHILOSOPHY—PASS

First Paper—Psychology

1. **Either** (a) Define Psychology and point out its relation to (i) Ethics and (ii) Metaphysics.

Or, (b) What are the methods of research available to the psychologist ? Determine their relative values.

2. **Either,** (a) Explain the nature and conditions of Attention. How is it related to Consciousness ?

Or, (b) Distinguish between Sensation, Perception, and Apperception. How does Acquired Perception differ from Perception ?

3. Trace the development of the idea of Self in the human mind. Is it wholly the outcome of association ?

4. **Either,** (a) Determine the character, forms and scope of the Laws of Association. Are they adequate to account for all psychical operations ?

Or, (b) Indicate the character and course of Mental Development. Is it wholly due to circumstances ?

5. **Either,** (a) Distinguish between Emotion, Mood, and Sentiment. Analyse the Sentiment of the Sublime.

Or, (b) Distinguish between Appetite, Desire and Affection. How are they related to Instinct ?

6. Either, (a) Distinguish between Deliberation, Resolution and Effort. How is Effort connected with the Consciousness of Power ?

Or, (b) Explain the character and condition of Belief. How is Belief related to Action ?

PHILOSOPHY—PASS

Second Paper—Ethics

1. 'Ethics is more closely related to Philosophy than to the natural sciences.' Fully explain this statement.

2. Discriminate between the psychological and the ethical aspect of Springs of Action, and expound the doctrine of their ethical gradation.

3. Examine the psychological presuppositions on which all Hedonistic systems are based. Can an altruistic system be erected on a Hedonistic basis ?

4. Show how the question as to the nature of the Ethical End is connected with the question as to the nature of the self.

5. 'The realization of human personality means its realization in society.' Fully explain this.

6. Explain fully what you mean by the Standards of Judgement.

7. Discuss carefully the theories which admit but mistake obligation.

8. It has been said that the idea of self-determination combines the Libertarian and the Determinist theory. Explain the position.

9. Discuss the problem of Sin, noticing the following points :—
(a) existence of, (b) nature of, (c) recovery from, and (d) responsibility for.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. State clearly the meaning, province, and use of Philosophy, and the relation of Philosophy to Natural Science, and to Theology.

2. **Either, (a) Explain fully the meanings of Dogmatism and Scepticism in Philosophy, and also the meaning of Criticism and its bearing on these two methods.**

Or, (b) Explain the meanings of, and difference between,

Conditioned and Unconditioned in Philosophy. On what grounds do some say that it is impossible to know anything about what is unconditioned. Give your own opinion, with reasons.

3. Explain the difference between a living Organism and a piece of Mechanism and give your opinion as to whether Life can be derived from Mechanism, with your reasons.

4. **Either**, (a) State the principal hypotheses as to the connexion between Soul and Body, and give your own conclusion, with reasons.

Or, (b) Explain the meaning of Causes and Causality in nature, and also that of Energy and Conservation of Energy, and the relation between Energy and Causality.

5. Explain the meaning of Self and the Identity of Self, and state what reasons there are for thinking that the Self will continue to exist after the present life.

6. **Either**, (a) What is meant by saying that the world is subject to Moral Government? What arguments may be advanced against this belief? Give your own conclusion, with reasons.

Or, (b) What is meant by saying that the world is pervaded by Universal Reason? What grounds are there for believing that it is so? What arguments may be advanced against the belief? Give your conclusion.

1919

PHILOSOPHY—PASS

First Paper—Psychology

1. (a) **Either**, Explain the meaning and method of Physiological Psychology and of Comparative Psychology, showing what each contributes to knowledge of mind.

(b) **Or**, Give a short account of the structure of the human Brain, and of the relation between the Brain and the Mind, giving evidences.

2. Explain how the sensations of Taste, Smell, and Touch are produced, and show what knowledge they give regarding the external world.

When you lift a stone, you know that it is an external thing. Explain the process by which you know it to be such showing whether the knowledge is Intuitive or Inferential.

4. (a) **Either**, Explain what is meant by a Mental Image, and

how Mental Images are produced. In what processes of mind are Images predominant? Give illustrations.

Or, (b) Define and show the connection between perception, Memory, and Thought (logical), giving illustrations. Distinguish the different stages or phases of Thought, giving illustrations.

5 (a). **Either**, What is Feeling, and what is the relation between Feeling and Organism? Can any explanation be given of the fact that some Feelings are painful and others are pleasurable?

Or, (b) What are Habits, and how are they acquired? Explain how Habits differ from Instincts, and how the formation of Habits contributes to the making of Character, with illustrations,

6 (a). Crows start at the sound of a gun.

(b) Swallows fly southwards when winter is approaching.

(c) Children run for shelter when they see a storm coming on.

Explain the psychological difference between these different forms of action, and give them their proper names.

PHILOSOPHY—PASS

Second Paper—Ethics

1. **Either**, Determine the scope of Moral Science and its relation to Metaphysics.

Or, What methods should be employed in Moral Philosophy? Examine in this connexion the view of Sidgwick.

2. Distinguish between Sin and Error. Is it a sin or an error on the part of a young man to neglect his education?

3. **Either**, What are the conditions of our Moral Life? Indicate their relative importance.

Or, Determine the nature and grounds of Moral Obligation. Is it possible for an individual to do more than his duty?

4. **Either**, Discuss the relative merits of Egoism and Altruism as moral theories.

Or, Estimate the relative values of the theories which take Divine and Political Law as the moral standard as Law or an End?

5. **Either**, Distinguish between Duty, Merit, and Virtue. Are they connected in any way?

Or, Distinguish between Desire, Motive, and Intention. Which of them determines the moral quality of an action?

6. Write explanatory notes on *any three* of the following :—

Self realization, Paradox of Hedonism, Eudæmonism, Conflict of Duties, Conflict of Motives.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. **Either**, What is the need of the discipline of metaphysics ? In what sense is Philosophy the study of experience as a whole ?

Or, How does the demand for knowledge lead to the use of standpoints of both Natural Science and Metaphysics ?

2. What is the source and criterion of knowledge according to Empiricism and Rationalism ?

3. **Either**, Discuss critically the arguments in proof of the existence of God.

Or, What is your conception of God ? Is He Absolute and Infinite ? State your reasons.

4. Is the pluralistic conception of the universe consistent with Theism ? What solution does Concrete Monism offer ?

5. What do you consider to be the true nature of Space and Time ?

6. **Either**, Does Idealism resolve physical phenomena into mental phenomena, mark the objects that come into being, and finally obliterate the distinction between subjective and objective ?

Or, Discuss any problem of Philosophy that has a direct bearing on the present day life and thought.

1920.

PHILOSOPHY—PASS

First Paper—Psychology

1. **Either**, What is Psychology and with what is it concerned ?

Or, Explain the grounds on which a science of mind has been regarded as distinct from a philosophy of mind.

2. What are the characteristics and varieties of Attention ? What is the place of Attention in the development of mental life ?

3. **Either**, Illustrate by a concrete case that perception is a synthetic experience, and the combination of the new and the old is the essential part of the synthesis.

Or, Show that memory, imagination, and reasoning are simply half-way houses between stimuli and reactions.

4. **Either,** Explain fully, by illustrations, the Laws of Association.

Or, Examine the several stages of cognition from its appearance in sensation up through the various steps to reasoning.

5. Discuss the psychological significance of emotion as a fact of consciousness.

6. **Either,** Is there any specific mental element to be called Will ? Explain fully the relation of Volition to Interest, Effort and Desire.

Or, Write brief explanatory notes on the following :—

(a) Our education means a little more than a mass of possibilities of reaction.

(b) There can be no improvement of general or elementary faculty of memory ; there can only be improvement of our memory for special system of associated things.

(c) Is there anything psychologically incompatible in a boy being thoroughly interested in both fishing and geometry ?

(d) Whether Napoleon Bonaparte or Gladstone was the larger volitional quantity from the point of view of the psychological machinery, and why ?

PHILOSOPHY—PASS

Second Paper—Ethics

1. Define and show the relation between Moral Law, Political Law, and Physical Law. Explain, and give your own opinion of the doctrine which makes Moral Law to be only a branch of Political Law.

2. Distinguish between Natural Evil and Moral Evil, and between Moral Evil and Error, giving examples of each. Can a person be morally responsible for his Errors ? Give your reasons with examples.

3. 'Self-determination is a postulate of Moral Judgement': explain this by showing the meanings of Self-determination and Moral Judgement, and showing that the latter is impossible without the former. What Judgements may be passed on an action not self-determined ?

4. Distinguish between the intellectual and the emotional elements of Moral Consciousness, and illustrate your meaning by ana-

lysing any voluntary action, and showing how these elements enter into it.

5. 'We are morally *bound* to do what is right': discuss the nature of the binding force, stating different opinions, and giving your opinion, with reasons and examples.

6. What is meant by an Ethical Standard? Explain and examine the theory which makes pleasure to be the ultimate Ethical Standard.

7. 'Morality is Eternal and Imutable Law; Morality changes circumstances of human life; explain these two theories, and give your own opinion regarding them, with your reasons.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. **Either**, What do you understand by Philosophy? How is it related to Science and Epistemology?

Or, Determine the relative claims of Idealism and Realism as philosophical systems.

2. **Either**. Estimate the relative merits of Dogmatism, Empiricism, and Scepticism as methods of philosophizing.

Or, Determine the relative claims of Monism and Pluralism as philosophical theories. Which of them offers the more satisfactory explanation of the facts of our moral and religious life?

3. Clearly explain the contents and origin of any one of the following ideas :—(a) Space, (b) Time, (c) Substance.

4. **Either**, What do you understand by Evolution? Distinguish between its mechanical and teleological forms. Which of them do you consider to be a satisfactory account of natural phenomena?

Or, Explain the different views as to the relation of mind to Body. Which of them offers a satisfactory explanation of the relation?

5. **Either**, How do you come to know the external world? Examine the different answers which have been given and vindicate the one which seems to you to be correct.

Or, Discuss the questions of Free Will and Necessity. Is absolute indeterminism tenable?

6. Write short explanatory notes on any *four* of the following :—Truth, Criticism, Optimism, Conservation of Energy, the Causal Series, Ontology.

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PHILOSOPHY—PASS

First Paper—Psychology

1. State the purpose and scope of Psychology, and explain its relation (a) to Physiology and (b) to Metaphysics. Is Psychology a 'Natural Science'?
2. Define and distinguish clearly 'the Cognitive, Emotional, and Conative elements of mind' giving illustrations; and show with examples their dependence on one another.
3. Define Sensation, and show how Sensation is produced, explaining your meaning by examples; and give an account of the 'Sensation of Organic Life', showing their importance.
4. (a) How do we know that there is a world of material things existing outside of ourselves, and (b) how do we know that there are other mental beings besides ourselves?
5. Analyse the processes which make possible the memory of past events; and point out the difference between intelligent Memory and learning by rote.
6. Describe and show the relation between Judgement, Conception, and Classification, and explain the use of Language. Is Thought possible without Language?
7. Explain the nature of Emotion, showing how it is produced, with illustrations; and exemplify the Egoistic and Social Emotions, showing how they influence the characters of men.
8. Define Instinct, and describe fully any Instinctive Action, showing in what points Instinctive differs from (a) Reflex and (b) Voluntary Action.

PHILOSOPHY—PASS

Second Paper—Ethics

1. **Either**, Define Ethics and point out its relation to Politics and Metaphysics.
Or, Distinguish between Moral, Immoral, and Non-Moral acts. How are they related to one another?
2. **Either**, Analyse Moral Consciousness indicating the relative function of the elements which constitute it.
Or, Discuss the question whether moral Consciousness is original or derivative.
3. **Either**, determine the character and conditions of the Moral

Judgement. How is such a Judgement arrived at, and are we accountable for it ?

Or, Is diversity of Moral Judgement compatible with the intuitional theory of Morals, and is unanimity of such Judgement consistent with Hedonism ?

4. **Either,** Determine the character of Humility as a virtue. Is it consistent with Veracity and Self-respect ?

Or, Determine the character and conditions of Duty. Can there be a conflict of duties ? Which line of action should be adopted in such a case ?

5. **Either,** Is pleasure identical with happiness ? Examine the doctrine that the greatest happiness of the greatest number is the standard of Morality.

Or, Distinguish between Egoistic and Altruistic Hedonism. Which of them seems to you to be the more consistent ethical theory ?

6. **Either,** What do you understand by the Moral Sanctions ? Examine the views of Bentham and J. S. Mill in this connexion, and explain the end served by the sanctions.

Or, Distinguish between Desires and Affections, indicating their place in our moral constitution. How are they related to Will ?

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. **Either,** What is Metaphysics ? In what sense is it akin to poetry and religion ?

Or, What is Philosophy ? What is Science ? Explain the scope or province of each.

2. **Either** What is the place of Dogmatism, Scepticism, and Criticism in the development of the problem of knowledge ?

Or, What are dogmatism and Scepticism in Philosophy ? What objection is there to each and what do you consider to be the best way of avoiding them ?

3. Analyse and discuss fully the concept of Matter.

4. **Either,** Discuss critically the concept of Self.

Or, Analyse the idea of self as you understand it, and state any idea of self different from the one you have given, with some criticism.

5. What do you consider to be the most reasonable account of the relations of Body and Mind ?

6. **Either**, Discuss the problem of Causality in its popular, scientific, and philosophical sense.

Or, State your own view with regard to the nature of Causality and state the theory different from your own, with criticism.

7. What is your own conclusion as to the Transcendence or Immanence of God ?

8. **Either**, What decision can be arrived at as to the particular problem of the continuance of Self after death on metaphysical grounds ?

Or, Are there any metaphysical grounds to believe in the continuance of the Soul after death ?

1922

PHILOSOPHY—PASS

First Paper—Psychology

1. Give an account of any concrete Reflection together with a description of its physiological mechanism. Indicate by diagrams or otherwise how it is controlled by the higher nerve-centres.

2. What are the characteristics of 'the stream of consciousness' (James) ? In what respects is the comparison of mind to a stream an improvement upon the Associationist account of mind ?

3. What light does Psychology throw on the possibility of a freely chosen ethical life and on the limits of self-control ?

4. Define and illustrate any *five* of the following :—Physiological time sense ; Law of Redintegration ; Desultory memory ; Motor reaction ; Aesthetic imagination ; Expectant attention ; Motor habit ; Fixed idea ; Ideational reflex ; Nascent image.

5. What is a *local sign*, and how does it help us in elaborating the idea of space ? Discuss the question with reference to visual perception.

6. What arguments have been advanced to prove the existence of the Subconsciousness ? Indicate its importance in our mental life.

7. Analyse a *concrete* case of Desire. How is Desire related to Intention and Choice.

8. Give a *critical* account of the James Lange theory of Emotion.

9. Enunciate and illustrate the various laws of pleasure and pain. What are mixed and mental feelings ?

PHILOSOPHY—PASS

Second Paper—Ethics

1. Distinguish between Positive and Negative sciences, giving examples. Why is Ethics called a normative science ?

2. Define *motive* and *intentions*. Is the moral judgement concerned with motives or intentions ?

3. State the doctrine of Psychological Hedonism and distinguish it from Ethical Hedonism.

4. Give a short exposition of Utilitarianism as a standard of conduct.

5. Formulate Kant's doctrine of the Categorical Imperative. Examine the view that all duties are deducible from it.

6. Define Conscience and consider how far it is reliable as a faculty of moral judgement.

7. What is meant by 'conflict of duties' ? Give instances. What should the individual do in such a case ?

8. 'The virtues which it is desirable for human beings to cultivate vary considerably with different times and places.' Explain and examine.

9. We can realize the true self only by realizing social ends.' Explain and examine.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Define Philosophy, and explain its province and purpose and exhibit the chief points of difference between Philosophy and Science.

2. Explain the difference between *a priori* and *a posteriori* elements of knowledge, giving, examples of each kind. Some thinkers say that knowledge contains no *a priori* elements : give your own opinion on this subject, with your reasons.

3. What is meant in Philosophy by the Relative and the Absolute ? *World, Soul God* : are these relative or absolute ? Give your reason in each case.

4. Explain the difference between a Mechanism and an Organism illustrating your meaning by examples. What is meant by saying that Organisms are of different Species ? Give examples of Species.

5. Explain the principal points of difference between a Living Thing and a Lifeless Thing. Do all living things possess Consciousness? Is every Conscious being a self? Give your reasons in each case.

6. Explain the nature of Reason illustrating your meaning by examples. Are the actions of animals guided by Reason? Make your meaning clear by example.

7. Analyse your idea of God and of the relation between God and the world.

8. Distinguish between a Monistic, a Dualistic, and a Pluralistic conception of Deity, and give one prominent type of each.

1923

PHILOSOPHY—PASS

First Paper—Psychology

1. **Either**, Define the scope and methods of Psychology.

Or, Explain precisely the relation of Body and Mind, referring to the different views on the subject.

2. **Either**, Distinguish between sensation, perception and conception.

Or, What do you understand by the term 'Association of Ideas'? What are the 'Laws of Association'? Does 'Association' account for all connexions of mental states and processes?

3. **Either**, Determine the relation of Attention to Feeling and to Will. How is Attention related to Apperception?

Or, Distinguish between Memory and Imagination. What is the relation between Imagination and Hallucination?

4. Explain the development of the ideas of Time and Cause in the human mind. Is there any connexion between them?

5. **Either**, Indicate the character and conditions of the Aesthetic Sentiments. How would you account for the feeling of the ludicrous?

Or, Distinguish between Feelings, Emotions and Sentiments. How are they related to Moods and Passions?

6. **Either**, Distinguish between Instinct and Habit. 'Man is a bundle of instincts.' Critically examine the statement.

Or, Distinguish between Desire, Will, and Motive. How are they related to Will? Is conflict of motives possible?

PHILOSOPHY—PASS**Second Paper—Ethics**

1. How does moral action differ from non moral? Are the offences committed by hereditary criminals and the self-indulgences of habitual drunkards moral or not?

2. What is the object of moral judgement? Do you agree with the view that the end justifies the means? Discuss the question with special reference to the punishment of criminals.

3. There is a progressive unfolding of the life of the spirit which requires a gradation of moral codes in an ascending scale adapted to the different stages. Expand this, and show whether the standards that apply to the adult and the normal are equally applicable to the child and the subnormal or defective.

4. Analyse the consciousness of Duty, and distinguish between 'obligation' and 'right' and 'virtue' and 'duty' as moral categories. Discuss briefly the following: (a) the moral Law implies a lawgiver, (b) 'ought' implies 'can.'

5. When conscience is referred to as the fundamental principle of morals, we must not understand it to mean the conscience of this or that individual'. Explain What is your view of the proper attitude of the individual towards the rules of his community?

6. What are the Moral Sanctions? How is Moral Obligation related to the Moral Sanctions? Discuss this with special reference to the question whether the consciousness of obligation is possible in a state of segregation from society and independently of the mediation of an objective code of duties.

7. The progress of Hedonism through Bentham, Mill, Spencer, and Sidgwick is an illustration of the gradual surrender of the hedonistic principle. Explain fully.

8. How does Kant arrive at the Categorical Imperative? Estimate its value as criterion of moral life.

9. Do you accept the doctrine of the relativity of moral distinctions in the sense that there is a stage beyond good and evil where these distinctions do not apply?

10. Is morality possible without religion? In perception, it is Self and Nature; in morals, it is Self and God, that stand face, to face in the subjective and the objective antitheses. Explain and discuss.

PHILOSOPHY—PASS**Third Paper—General Philosophy**

1. Explain the meaning and use of Epistemology, and show how it is related to Philosophy in general.
2. What is meant by Method in Philosophy? Explain the meanings of Dogmatism and Scepticism in Philosophy, and show to what consequences each of them leads.
3. Analyse the idea of Causality, and discuss the question whether the belief in the law of Causality is of a *posteriori* or a *priori* origin.
4. What is meant by saying that 'the world is only a vast machine'? Point out evidences which suggest a different interpretation.
5. Explain and examine the Empirical theory of Self or Mind (as held by Hume or Mill), pointing out its bearing on the questions of Morality and Future Life.
6. Distinguish between Realism and Idealism in Philosophy, and state which of them give the better explanation of the world, giving your reasons.
7. Explain the meaning of Personality, and show how the idea of a person leads to the ideas of Personal Rights and Moral Law.
8. What is meant by saying that God is the Absolute Being? How can Absoluteness in God be reconciled with Evil in the World?

1924**PHILOSOPHY—PASS****First Paper—Psychology**

1. Explain the work of Psychology (a) as the Natural Science of Mind and (b) as the Metaphysics of Mind showing the relation between these two forms of mental study.
2. Explain the difference between Sensation and Idea, showing how each is produced and illustrating your meaning with examples.
3. You see a tree at some distance and judge (a) that it is a palm tree, and (b) that it is about a mile distant; analyse the process involved. Can you judge in the same way the distance of the moon?

4. Analyse (a) the process of remembering by Contiguity, and (b) the process of remembering by Similarity, giving examples; and show what each contributes to knowledge of the world.

5. Explain the processes involved in Believing, showing how Belief is produced, and give examples.

6. Analyse Sympathy. Some argue that Sympathy has its origin in Self-interest; examine this theory illustrating your meaning by examples.

7. State the nature and origin of Habit, showing the bearing of Habit on Character. Some have said that a person's Character is 'a bundle of Habits'; give your own opinion on this, with reasons.

8. Analyse Volition, giving an example. What is meant in Psychology by Freedom of Volition? Explain the theory opposed to Freedom.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Either, Define Ethics and show how it is related to Philosophy and to the Positive Sciences.

Or, What are the facts of our moral life? How is Ethical Method related to Ethical Theory?

2. Either, What is a non-moral action? Has the subconscious life any moral significance for the individual? In there any difference between approving a wrong action and doing it?

Or, Distinguish between Desire, Motive, and Intention. Which of them determines the moral quality of an action? Fully explain this by reference to a concrete example.

3. Either, What are the objects of Moral Judgement? Is it intuitive or inferential? Has it any moral quality? Give reasons for your answer.

Or, Indicate the character and function of the Moral Sentiment. How is it related to the Moral Judgement? Can the moral sentiment be always taken as sure test of the moral quality of an action?

4. Either, Distinguish between relative and absolute good. What is your view of the highest human good and of the means of attaining it?

Or, Distinguish between Psychological and Ethical Hedonism. Does the one inevitably lead to the other? Is Hedonism the same as Eudaemonism?

5. Either, Is Society morally justified in restraining the freedom of the Individual? Is punishment for an attempt to commit suicide justifiable? Give reasons for your answer.

Or, Distinguish between Conscience and Prudence and explain how they jointly contribute to our moral life. Is Prudence the same as Wisdom?

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Explain the difference, if any, between the poetic, the scientific, and the philosophic attitude.
2. State and examine the view that all knowledge is derived from sense-perception.
3. What do you understand by the term Absolute? What are the principal forms of the Absolutism?
4. Explain the difference, if any, between *life* and *mechanism*.
5. State and examine the conception of evolution.
6. State the principal meanings of the term 'self'. Give a critical estimate.
7. What is a 'moral law'? How does it differ from a law of natural science?
8. State and examine the doctrine of Pluralism.
9. Discuss the conception of Necessity. Give a critical estimate.
10. All objects of experience seem to be in the time series. How do you reconcile this fact with the ideas of eternity?

1925

PHILOSOPHY—PASS

First Paper—Psychology

1. How can Psychology rise to the status of science if its standpoint be 'individualistic'? Discuss how far Psychology can be called a 'natural science.'
2. Classify the sensations of colour, and elucidate *two* main theories on the subject of the visual sensation.
3. Look at the receding figure of the guard at the Examination Hall and explain how you perceive (a) that the figure is moving and (b) that its distance from you is varying.

4. Explain the function of Imagination in mental life. How is an image related to a concept ?

5. Distinguish between sense-feeling and emotion, and discuss how far this distinction is justified if James's theory of emotion be true.

6. Analyse your belief that your answer-book will be examined. Distinguish belief from doubt and disbelief.

7. Enumerate the factors that make up a complete process of sympathy, and discuss how far sympathy can be cultivated.

8. Discuss the nature of Attention, and explain its relation to consciousness.

9. Discuss the effect of habit on attention, feeling, and will.

10. Give a concrete case of instinctive behaviour, and discuss how far it can be called 'blind.'

PHILOSOPHY—PASS

Second Paper—Ethics

1. Define Ethics, and point out its relation to Psychology and Philosophy.

2. Distinguish between Motive and Intention. Which of them determines the ethical quality of an action ?

3. Analyse the nature of Conscience. Is it present in ready-made form in all persons ? Give reasons for your answer.

4. Distinguish between Hedonism and Eudæmonism, and discuss their relative merits as moral theories.

5. Either. How has the utilitarianism of Bentham been modified by J. S. Mill, and that of J. S. Mill by Spencer ?

Or, Is Hedonism the same as Utilitarianism ? Critically examine the modified Utilitarianism of J. S. Mill.

6. Enumerate Kant's doctrine of the Categorical Imperative. Discuss its value as a theory of ethical life.

7. Indicate the main characteristics of the Moral sentiments, and examine their relation to the Moral judgment.

8. Distinguish between Virtue and Prudence. Is it possible to classify Virtues on a strictly ethical basis ?

9. 'As the individual apart from the society is an unreal abstraction, so is society apart from the individual.' Examine the position.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Explain what is meant by *a priori* Truth and give examples of judgments commonly held to be *a priori*, with reasons why they are held to be such. Can any different theory be advanced regarding them?

2. What is meant in Philosophy by Realism and Idealism? State briefly the grounds on which each of those theories is based. Give your own opinion regarding them, with reasons.

3. What, in Philosophy, is meant by Substance? Explain how the idea of Substance is obtained. Illustrate your meaning by examples.

4. Explain the difference between a Machine and Living Body, illustrating by examples. Is it possible that Life is only a form of Mechanism?

5. Explain what you consider to be the nature of Soul and the relation between Soul and Body. Give any *one* reason for believing in the Future Existence of the Soul.

What is the fundamental difference between Animal Mind and human Mind? Explain it, with illustrations.

7. Explain the difference between Monism, Dualism, and Pluralism in Philosophy, and give your opinion regarding them.

8. Analyse the Idea of God and the relation between God and the world as you conceive them.

1926

PHILOSOPHY—PASS

First Paper—Psychology

1. Either, Explain the *nature* of *Psychology* as a *science*. How does *Psychology* bear on the study of *Philosophy*?

Or, What is *Experimental Psychology*? Describe any psychological experiment you know of, and give your own estimate of its results.

2. Either, Explain the *nature* of *consciousness*. Distinguish between *conscious*, *subconscious* and *unconscious* states.

Or, Show how *thinking*, *feeling*, and *willing* are related in *mental development*.

3. **Either**, Explain the *nature of perception*. Does *perception psychologically* differ from *illusion*?

Or, Analyse the mental processes involved—

(a) in writing a new novel.

(b) in reading a new novel.

4. **Either**, Distinguish between *belief* and *doubt*. What are the *sources of belief*?

Or, Expound the psychology of *dreams*.

5. **Either**, Describe the expressions of *fear* and *anger*. Show how *emotions* are connected with their expressions.

Or, Analyse the *sentiment of the sublime*.

6. Write explanatory notes on any *two* of the following :—

(a) *habit*, (b) *self-control*, (c) *consciousness of freedom*.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Briefly indicate the scope of Ethics. Why is Ethics called a normative science?

2. Define Conscience, and consider how far it is infallible as a faculty of moral judgement.

3. **Either**, Examine the merits of Eudaemonism as a moral theory.

Or, Distinguish between Egoism and Altruism. Is it possible to effect a conciliation between the two attitudes?

4. Give a critical estimate of the Kantian principle of the Categorical Imperative. What in your opinion is the real significance of the principle?

5. What is the Paradox of Hedonism? Examine Mill's account of Universalistic Hedonism.

6. What do you understand by 'conflict of duties'? Is there any real conflict among duties? Support your answer by reasons.

7. Show the relation between Duty and Virtue. Is any classification of Virtues possible from a strictly ethical stand-point?

8. What are Moral Sanctions? Fully discuss Bentham's doctrine of Moral Sanctions.

9. Point out the relation of the Individual to Society. In what sense is the idea of an organism applicable to human Society?

PHILOSOPHY—PASS**Third Paper—General Philosophy**

1. Explain the meanings of Epistemology and Ontology (Metaphysics), and show how they are related to each other as departments of Philosophy.

2. Explain the meaning of Dogmatism, Scepticism, and Criticism, and show their relation to each other as methods of Philosophy.

3. Analyse (a) your idea of Matter, and (b) your idea of Soul bringing out clearly the difference between them ; and explain how you have obtained each of these ideas.

4. State what you mean when you speak of your own Self analysing the idea fully. Is there any reason for believing in the continued existence of the Self after death ?

5. Explain fully what is meant by Evolution in Nature, with illustrations. Sketch briefly the main reasons for believing in Evolution. Is there any other theory of the origin of nature ?

6. What is meant by saying that God is the Absolute ? What do you consider to be the relation between God as absolute and the finite things and events of nature and history ?

7. Explain the meaning of Realism and Nominalism in Metaphysics, and show the bearing of this question on the meaning of Species in Nature.

8. What is Reason ? What is meant by saying that there is a Universal Reason and what implications are contained in that doctrine ?

1927**PHILOSOPHY—PASS****First Paper—Psychology**

1. Either Distinguish between the standpoint of Psychology and the standpoint of Physical Sciences.

Or, Give a critical estimate of any one of the following :—

(a) Faculty Psychology. (b) Associationism. (c) Phrenology.

2. Either Discuss Fechner's interpretation of Weber's Law. What are the limitations of the law ?

Or Explain and illustrate the following :—.....The will.....

cannot be fully understood, so long as we confine ourselves to the clear daylight of consciousness.'

3. **Either** Analyse the process of 'Discrimination'. Distinguish between difference as immediately felt and difference as inferred.

Or, Examine the following :—'A fully developed perception is itself simply a kind of habit.'

4. **Either**, Explain and illustrate :—

(a) Sensation of Time ; (b) Idea of Time.

Or, How is imagery related to thinking ? What is your own image ?

5. **Either** Distinguish between—

(a) Sense-feeling and Emotion ;

(b) Emotion and Mood.

Or, Discuss the following :—Pain is original ; Pleasure is absence of pain.

6. **Either**, Explain and illustrate :—'While involuntary attention has the character of instinct, voluntary attention makes it appear as an impulse.'

Or, Write short explanatory notes on :—

(a) Arrested action ; (b) deterranets, (c) self-control.

PHILOSOPHY—PASS

Second Paper—Ethics

1. How do you distinguish Science from Philosophy ? Do you regard Ethics as a Science or a Philosophy ?

2. Distinguish motive from intention. Which of them is the main determinant of the moral judgement ?

3. Give a critical account of psychological hedonism.

4. How does Mill pass from egoistic hedonism to utilitarianism ?

5. What does Kant mean by 'the good will' ? Critically examine Kant's ethical theory.

6. 'Self-realization is through self sacrifice.' Explain. Do you support this view ?

7. In your conception of ethics, what place would you assign to Conscience ?

8. What is your view of the relation of rights to obligations ?

9. Give a critical account of the retributive theory of punishment.

PHILOSOPHY—PASS**Third Paper—General Philosophy**

1. What do you learn from experience? Philosophy is described as the analysis and rationalization of experience. Explain the meaning of this, giving illustrations.

2. Show how you acquire the ideas of Space, Motion, and position in space, illustrating your meaning by examples.

3. Explain what is meant by infinite and finite, and how you acquire the idea of infinity, showing whether it is of a *a priori* or a *posteriori* origin.

4. The world is said to be 'a system of reals.' Explain in what the reality of a material thing consists, and in what the reality of a mental being consists.

5. When you are thinking out the answer to a question, what physiological processes are going on in your system, and what relation is there between the physiological processes and those of thinking?

6. The actions of finite beings are subject to necessity. Explain the meaning of this statement, and the grounds on which it is based. What is your own view with regard to it.

7. The actions of human being are rational while those of animals are non-rational. Explain the difference and illustrate it with examples.

8. What reasons are there for thinking that the human mind continues to exist after the dissolution of the physical organism?

1928.**PHILOSOPHY—PASS****First Paper—Psychology**

1. Describe some of the results of Psychology that seem to you to have special application to education.

Do you consider Psychology to be helpful to philosophic studies?

2. **Either**, Explain and illustrate (a) unity of consciousness, (b) relativity of consciousness, (c) dichotomy of consciousness.

Or, Write short explanatory notes on—(a) consciousness (b) unconsciousness, (c) self consciousness.

3. Either, Analyse 'muscular sense.' How far is mental effort connected with muscular effort? Distinguish between—(a) effort to lift a weight, (b) effort to sit erect, (c) effort to recall a forgotten name.

Or, Analyse and compare the perceptions of Time and Rhythm (a) by hearing, and (b) by movement.

4. Either, Distinguish between sensation as cognitive state and sensation as cognized object. Why do we refer some sensations to the interior of the body, some to its surface, and some to qualities of objects outside the body?

Or, How are movements of objects perceived (a) by the moving eye, (b) by the eye at rest? Show why stationary objects appear to move after the eye has been looking at a moving object for some time.

5. Either, What are the conditions of obliviscence? What part does obliviscence play in the economy of the mind? When we have forgotten a name what means have we of recovering it?

Or, What light does the Psychology of illusion throw on the psychology of perception? What precisely is involved in the process of correction of an illusion?

6. Either, How does a pleasure or pain differ from a sound, colour taste, etc.? What, in your opinion, is the proper place of pleasure and pain in a classification of mental phenomena?

Or, Distinguish between—(a) indignation and hatred, (b) humility and shyness. (c) self-respect and pride.

Or, What is healthiness of Will? How does it differ from unhealthiness of Will? What are the ingredients of a strong Will?

PHILOSOPHY—PASS

Second Paper—Ethics

1. Explain the difference between moral and non-moral actions and between natural and moral evil, giving reasons and examples.

2. Show by what part (factor) of action you judge the action to be morally right or wrong giving reasons and examples.

3. State the conditions which you consider to be postulated in judging actions morally, defining each and showing why it has to be postulated.

4. Some hold that the moral rightness of an action consists in

conduciveness to happiness. Explain this theory and give your estimate of it with reasons and examples.

5. 'Some have held that men do good to other men only for the sake of good to themselves'. Examine this doctrine and give your estimate of it with reasons and examples.

6. Define Conscience and Prudence, showing the relation between them and giving examples. Do you know any form of thought that identifies them?

7. Explain the meaning and purpose of Punishment and its relation to moral laws giving differences of opinion and reasons for them.

8. In what does the character of a person consist, and how is character formed?

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. What do you understand by Philosophy? How is it related to Science and Religion?

2. What do you understand by the Critical Method in philosophy? How is it related to that of Dogmatism?

3. What is your conception of God? What are your reasons for adopting it?

4. Is the Pluralistic conception of the universe consistent with Theism? Discuss fully.

5. What do you consider to be the true nature of Space and Time?

6. What is the nature of the Self? Do you think that the self will continue to exist after death?

7. Discuss the question of freedom of the will. Is absolute indeterminism a tenable hypothesis?

8. Write a short note on the nature of evolution, with special reference to the problem of creative *versus* emergent evolution.

1929

PHILOSOPHY—PASS

First Paper—Psychology

1. Either, Discuss the nature and limitations of introspection as a method of Psychology.

Or, Discuss how far the study of behaviour can lead to an understanding of mental life.

2. **Either**, What do you understand by the terms Illusion and hallucination? How would you account for them?

Or, Distinguish between perception of Space and conception of Space. Describe their characteristics.

3. **Either**. How would you distinguish between memory and imagination? What is constructive imagination?

Or, State and examine the principal laws of association of ideas.

4. **Either**, Describe the character of the influence of emotion on attention, thought, and will.

Or, What do you understand by the terms—passion, sentiment, feeling, mood, and temperament?

5. **Either**, What are the different stages in the development of attention? Discuss the relation between attention and interest.

Or, How does the child's capacity of attention differ from that of the adult?

6. **Either**, What do you understand by the term voluntary action? Examine the criteria of voluntary action.

Or, Discuss the nature of involuntary action. Define the various types of involuntary action.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Show how Ethics is related to (a) Psychology, (b) to Sociology.

2. Does the moral quality of an act inhere in the act regarded objectively, or in the subjective willing of the act, or in both? Discuss the question, with reference to a concrete example.

3. Are there 'Kinds of Pleasure'? Discuss the question, with special reference to J. S. Mill's view.

4. Distinguish between—

(a) Right and Duty,

(b) Duty and Virtue.

5. Discuss the 'Retributive Theory of Punishment' with special reference to the question of Capital Punishment.

6. Does the moral consciousness throw any light on the problem of Freedom? Discuss the question, with special reference to Kant's view.

7. Is the moral life possible outside society? When is resistance to the social order justified?

8. How does the moral life differ from the religious ? Is morality possible without religion ?

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. What is Epistemology ? How is it related to Philosophy ?
 2. 'Philosophy is the analysis, interpretation, and criticism of experience.' Explain and illustrate this, and show how far it represents the true method of Philosophy.
 3. Consider fully the nature of Causality, and indicate its bearing on the question of God's existence.
 4. Distinguish between life and mechanism, and examine the mechanical theory of life.
 5. 'Evolution unfolds what is enfolded, and so the tree pre-exists in a seed.' 'Evolution brings about a new product and so the tree is in no sense present in its seed.'
- Explain the above concepts of evolution, and show how they are related to mechanical and teleological evolution.
6. Discuss the deistic and theistic conceptions of God, indicating their main differences.
 7. What is the nature of reason, and how do you account for its origin in man ?
 8. God as absolute cannot be a self-conscious person. Fully discuss this view.

1930

PHILOSOPHY—PASS

First Paper—Psychology

Answer any five questions.

1. **Either**, How does the treatment of mind in Psychology differ from that in Metaphysics.
Or, Discuss how far a knowledge of the physiological processes enables us to understand the character and laws of mental phenomena.
2. **Either**, What do you understand by the term sensation ? Give an analysis of Perception.
Or, 'When two persons look at the same physical object, their perceptions are not identical in character.' Discuss.

3. **Either**, Give an analysis of memory. Distinguish between Memory and Recognition.

Or, Why is it that (a) verses can be more easily learnt by heart than prose pieces ; (b) meaningful words are easier to memorize than meaningless syllables ?

4. **Either**, Give a critical estimate of the James-Lange theory of emotion.

Or, Discuss whether and to what extent there is any similarity between dream, hallucination, and imagination.

5. **Either**, Discuss the nature of the subconscious state of mind.

• **Or**, Write brief notes on (a) instinct, (b) ideo-motor action, (c) desire.

6. **Either**, Write a note on habit formation, with special reference to its physiological basis.

Or, Write from your own observation how a child differs from an adult with respect to the following :—(a) memory, (b) motor responses, (c) estimation of time.

PHILOSOPHY—PASS

Second Paper—Ethics

Answer any five questions.

1. Explain the relation of Ethics to Psychology, and show how far ethical theory has been affected by the results of psychological investigations.

2. What, in your view, is the essential character of intuitionist ethics ? Discuss the different forms of the intuitive method in modern ethics.

3. What are the ethical objections to the gambling habit ? Discuss the question from the intuitionist and the utilitarian stand-points.

4. What, precisely, is meant by the principle, 'Greatest Happiness of the Greatest Number' ? Is it acceptable as a workable standard of the moral life ?

5. Analyse the notion of duty, and discuss the question of 'conflicting duties.'

6. How is the individual related to society ? How far is patriotism a moral duty ? Does it ever cease to be morally right ?

7. What are the conditions of moral responsibility ? How far are we responsible for acts over which we have no control ?

PHILOSOPHY—PASS**Third Paper—General Philosophy***Answer any five questions.*

1. What do you understand by Philosophy ? How is it related to Ontology ?
2. What is meant by a method of Philosophy ? What are the methods of Dogmatism and Scepticism, and what is their use in philosophy ?
3. What do you mean by experience and reason ? How are they related as factors of philosophical knowledge
4. What is the true nature of Space and Time ? How do we get these ideas ?
5. What is the distinction between the soul and the self ? Do you think that there are sufficient reasons for the belief in a future life of the self ?
6. What is your idea of God ? How do you explain God's relation to man and the world ?
7. 'Our lives in theory and practice are an interpretation of reality.' Explain this statement and show its bearing on the use and value of philosophy for human life.

1931**PHILOSOPHY—PASS****First Paper—Psychology***Answer any six questions.*

1. What do you understand by Psychology ? How is it related to Physiology Is it possible to reduce Psychology to Physiology. or make it quite independent of Physiology ?
 2. What are the principal methods of psychological investigation and how do they co-operate to build up the science of Psychology ?
 3. What are the ultimate elements of our mental life, and how are they related to one another.
- Examine in this connexion the truth of the statement : 'If any one of the three species of conscious elements is to be regarded as the original form of consciousness, it must evidently be the will.'
4. Describe the structure and functions of the human brain in relation to mental life. Explain and examine the phrenologists' localization of mental functions.
 5. Distinguish between stimulus and sensation. How do

variations in the intensity of stimulus correspond to those of sensation? Give some experimental facts and examine the Weber-Fechner Law on this point.

6. Analyse the emotions of fear and anger, love and hatred, pointing out their characteristic difference in expression.

7. What do you understand by voluntary action? How is it conditioned in its origin and development by habit, instinct and emotion?

8. Write explanatory notes on :—(a) sensation-reflex, (b) reaction-time, (c) inhibition, (d) assimilation, (e) complication.

PHILOSOPHY—PASS

Second Paper—Ethics

Answer six questions only.

1. What place in Ethics would you assign to unconscious actions? Are actions done from habit to be judged morally?

2. Discuss the doctrine of evolution in its application to morality, and show how far it has affected the principles of Ethics.

3. Analyse the concept of the moral self, and discuss self-realization as the highest ethical end.

4. Distinguish between *legal right* and *moral right*. It may not always be *right* to do what one has a right to do. Explain and discuss.

5. Are there 'conflicting duties'? Discuss the question with special reference to how conflicting moral rules are dealt with (a) by Intuitionism. (b) by Utilitarianism.

6. On what ethical grounds would you condemn (a) an act of suicide, (b) Antonio's contract with Shylock as regards the pound of flesh?

7. 'Moral obligation is founded on the belief that virtue is enjoined by the command of God.' Explain and discuss.

8. Estimate the value of Kant's categorical imperative as a criterion of moral life.

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Discuss the definition of Philosophy as 'the sumtotal' of scientific knowledge' and indicate the relation in which Philosophy stands to Science.

2. 'Epistemology is a critical reflection on Metaphysics.' Explain

in the light of the above the relation of epistemology to philosophy, and the function of criticism as a method of philosophical knowledge.

3. What do you understand by a Category of Knowledge? Explain fully the nature of Causality as a category,

4. State what appears to you to be the truth of the principle of Conservation of Energy. Is its validity determined *a priori* or a *posteriori*? Determine the meaning of Correlation in this context.

5. Show how far the species-idea is modified by the concept of Evolution. What are the main points at issue between mechanical and teleological evolution?

6. What, in your opinion, is the relation between Mind and Body? Examine critically the different theories bearing on this problem.

7. Develop the implications of the idea of the Absolute, and show that it is not necessarily inconsistent with the idea of God.

8. Write explanatory notes on the following :—

(a) Social self, (b) Ethos, (c) *sub specie aternitatis*.

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1932

PHILOSOPHY—PASS

First Paper—Psychology

1. What is Psychology? How is it related to Philosophy?

2. What do you mean by mind and consciousness? What are your reasons for identifying or distinguishing between the two?

3. What are the physiological antecedents and consequents of mental processes? What light do they throw on the nature of the relation between conscious and nervous process?

4. Distinguish between sensation, perception, and ideation in perception?

5. Analyse the visual and auditory perceptions of distance and direction.

6. What do you mean by Emotion? How are emotions related to instincts and organic expressions?

7. What is Volition? How is it related to impulse? Do you agree with the view that 'the development of volition is neither more nor less than a process of reducing our impulses to order'?

8. Write short notes on :—(a) illusion, (b) hallucination, (c) association, (d) faculty psychology, (e) behaviourism.

PHILOSOPHY—PASS

Second Paper—Ethics

1. Give your own estimate of the method by means of which the seeking of general happiness may be proved to be a morally worthy end.

2. 'The old order changeth yielding place to new'. How far does this apply to the province of morality? Does not progressive morality invalidate the immutability and universality of moral laws?

3. Is sacrifice an end in itself? In what sense is it an element of the moral life?

4. Explain the meaning of the term *right*. Would you concede Shylock's right to the pound of flesh according to the terms of his contract with Antonio? If not, why not?

5. Is a man justified in putting an end to his own life? Give reasons for your answer.

6. Explain the meaning of moral responsibility, and its relation to moral obligation.

7. Explain the distinction between Hedonism and Utilitarianism, and examine the validity of their respective contributions to Ethics.

8. How would you morally judge a drunkard who, in a state of intoxication, abuses his fellow passengers in a railway train, and why?

PHILOSOPHY—PASS

Third Paper—General Philosophy

1. Define clearly the meaning and scope of Philosophy, Metaphysics, Epistemology, and Ontology.

2. State fully the implications of the Dialectic Method and show the use made of it in the analysis of philosophical knowledge.

3. Evaluate the meaning and importance of the different theories that have been held with regard to the *origin* of knowledge?

4. State precisely the significance of the Relative and the Absolute as evolved by a dialectical analysis of knowledge.

How does this analysis stand to the doctrine of Relativity of Knowledge?

5. Elucidate fully the implications of the conception of the world as a system of reals. Determine the significance of such a conception from the standpoint of Monism and Pluralism.

6. Discuss briefly the different forms of the doctrine of Biological

Evolution, and state which of them appeals to you and why.

7. Distinguish carefully between Soul and the Self, and exhibit the relation in which the individual stands to society.

8. What view of the relation of God to man would you propose consistent with the *free will* of man and Divine Providence?

9. State some of the chief reasons for belief in the existence of God.

1933

PHILOSOPHY—PASS

First Paper—Psychology

Answer any six questions.

1. Do you consider the knowledge of Psychology to be necessary to the study of Philosophy? Give reasons for your answer.

2. Explain and illustrate :—consciousness of object, consciousness of psychical states, consciousness of self.

3. What are the physiological concomitants of conscious states? What are the limits of the physiological explanation of mental phenomena?

4. What are the different classes of mental phenomena, and in what sense may we speak of these classes as different? Examine the position of the Faculty of Psychology in this connexion.

5. While writing your answer, you are conscious of a fly sitting on your face. How do you come to know that (a) it is a fly sitting, (b) that it is sitting on your face?

6. How does a *percept* differ from an *image*? How do you account for (a) the sense of reality attaching to dream-objects in the dream-state, (b) the sense of unreality attaching thereto in the waking state?

7. Distinguish between *reverie*, *artistic creation*, and *scientific discovery* as modes of imaginative activity.

8. A train of reasoning is described as a sequence of ideas determined by association. Explain.

9. Analyse the following :—

(a) Fear of ghosts in children.

(b) Fear of death.

(c) The miser's love of money.

(d) Love of power.

10. Either, Write short notes on :—the practical man, the man of strong will, the sentimentalist, the unpractical idealist.

Or, Explain the nature and characteristics of reflex, instinctive, and habitual actions.

PHILOSOPHY—PASS

Second Paper—Ethics

Answer any six questions.

1. Define the term *science*, and discuss the question whether 'Ethics' may rightly be called a science.

2. Discuss the morality or the opposite of the following acts :—

(a) A *surgical operation* that fails and kills the patient.

(b) A *murder* that is committed in the belief that it will bring political freedom to the country.

3. What place would you assign to pleasure in the organization of the moral life? Would you distinguish between the greatest and the highest pleasure? If so, on what grounds?

4. Write short explanatory notes on :—

(a) Thou oughtst, therefore thou canst.

(b) Die to live.

5. What is your idea of a perfect life? Is there a life 'beyond good and evil'?

6. What are the 'rights of man'? Does 'might' create 'right'? Give reasons for your answer.

7. Analyse the consciousness of moral obligation. Do you agree with the view that the sense of obligation is an offshoot of the experience of social discipline?

8. Is morality possible without religion? Give reasons for your answer.

9. Explain the nature of moral judgement. Discuss whether the *motive* or *intention* is the precise object of moral judgement.

10. Explain and examine any *two* theories of moral obligation.

PHILOSOPHY—PASS

Third Paper—General Philosophy

Answer any five questions.

1. What is Philosophy? How is it related to Science? In what sense can we define philosophy as the 'science of sciences'?

2. 'There is nothing in intellect which was not in sensation,

except the intellect itself.' Develop fully the implications of this statement for a theory of the origin of knowledge.

3. What do you understand by 'Causality' as a category of knowledge? What is its real nature as an objective fact?

4. Explain and examine the following statements :—

(a) The real is independent of all minds.

(b) The real has no existence apart from mind.

5. Discuss fully the different theories as to the nature and origin of species.

6. Expound the concept of 'personality' and show what light it throws on the distinction between the empirical and noumenal selves.

7. What do you understand by God as the Absolute? Does God's absoluteness leave any room for man's individuality and freedom?

8. State and examine the main grounds for a belief in the future life of the individual self.

9. Distinguish between Deism, and Pantheism, and estimate their value as religious theories.

10. Explain and examine Hume's 'theory of Causality' and compare it with that of Kant.

1934

PHILOSOPHY—PASS

First Paper—Psychology

Answer five question only.

1. What objections have been urged against introspection as a method of Psychology?

2. Indicate the stages through which the mind passes before the sensation of a sound gives rise to the perception of a bell.

3. Describe how solidity is perceived by vision.

4. Indicate the nature of Attention, and illustrate its different forms. Show the relation of Attention to Interest.

5. Distinguish Memory from Productive Imagination and Expectation. State and illustrate the different forms of Productive Imagination.

6. Analyse the nature of Belief.

7. Distinguish briefly, with suitable illustrations, sense feeling, emotion, and sentiment.

8. Give a psychological analysis of a *concrete* voluntary action.

9. Distinguish Consciousness from Self-consciousness on the one hand and the Subconsciousness on the other.

Give some illustrations of the operation of the subconsciousness in our everyday life.

PHILOSOPHY—PASS

Second Paper—Ethics

Answer any five questions.

1. Examine fully the view that Ethics 'though a normative science is not to be regarded as a *practical* science'.

2. Attempt a classification of the ethical methods, indicating what you consider to be the true Method of Ethics.

3. Explain and illustrate the different forms of non-moral action, and trace the growth of a voluntary action through its varying stages.

4. Show that 'the moral judgement is not properly passed upon a *thing done*, but upon a *person doing*. Determine precisely in this connection the nature and object of moral judgement.

5. Explain the relation of Ethics to Metaphysics.

6. Discuss the merits and demerits of Hedonism as a standard of moral life. On what grounds would you distinguish between Hedonism and Eudaemonism as types of ethical theory?

7. Trace the development of Utilitarianism as an ethical theory, with special reference to its different presentations by Bentham and Mill.

8. Explain and examine Kant's formulation of the categorical imperative.

9. Expound carefully the relation between duties and virtues. Is there such a thing as a 'conflict of duties'?

PHILOSOPHY—PASS

Third Paper—General Philosophy

Only five questions to be attempted.

1. 'Philosophy is simply the sum-total of all scientific knowledge'. Explain this definition. Is not Philosophy fundamentally distinct from the Positive Sciences?

2. Explain clearly the meaning of the terms 'Dogmatism' and 'Criticism' as methods of philosophical thought.

3. Compare Hume's 'Theory of Causality' with Kant's.

4. Explain the different theories of the relation between Mind and Body.

5. Explain the principle of evolution in nature. What is meant by teleological evolution?

6. Explain the following statement :—(a) Truth consists in copying reality. (b) Philosophy is the vision of the world's unity.

7. Explain the relation of God to Man. How does the pantheistic conception of God affect our idea of this relation?

8. Are Space and Time objective facts or merely abstractions of the mind?

9. Analyse the concept of the absolute. Can the absolute be known?

1935

PHILOSOPHY—PASS

First Paper—Psychology

Answer five questions only.

1. The standpoint of Psychology has been described as *individualistic*. Explain what this means and discuss how it can be reconciled with the possibility of Psychology as a *science*.

2. Distinguish between sensation and perception, giving concrete illustrations.

Explain the proposition that in an adult mind there is no such thing as pure sensation.

3. Discuss the function of imagination on the economy of mental life, clearly noting in this regard the distinction between memory and productive imagination.

4. **Either**, Discuss the relative merits of touch and vision as organs of space-perception.

Or, Write a short essay on the development of our idea of the external world.

5. Discuss the nature of instinct by reference to concrete instances from animal life.

How is Instinct related to Emotion ?

6. Formulate and illustrate the different Laws of Pleasure and Pain.

7. Critically discuss James's theory of Emotion.

8. Indicate the different stages of voluntary action by reference to a concrete case.

What elements of a voluntary action disappear when a habit is formed ?

9. Write critical notes on any **three** of the following :—

Faculty Psychology ; Consciousness as a function of the brain ; Psychology as a science of the soul ; thought as subvocal speech ; Mind as a stream of consciousness ; Image as weak percept ; Feeling as a function of sensation.

PHILOSOPHY—PASS

Second Paper—Ethics

Answer any five questions.

1. Explain the relation of Ethics to any **one** of the following :—Psychology, Metaphysics, and Theology.

2. Fully explain the definition :—Ethics is a normative science.

3. Distinguish the moral from the non-moral. Characterize the precise object of the moral judgement.

4. Why am I *morally obliged* to do what I perceive to be right ? Briefly explain the different views held on the subject.

5. Explain what is meant by the moral sanctions.

6. What are the different theories of punishment ? Give your own theory, with your reasons.

7. Explain and examine the theory that pleasure is the sole and ultimate end of action.

8. Explain the ethical doctrine of self-realization.

9. What is your own view of the relation of the individual to society ? How would you, according to this view, reconcile the conflicting claims of egoism and altruism ?

PHILOSOPHY—PASS

Third Paper—General Philosophy

Only five questions to be attempted.

1. Explain the relation between Epistemology and Philosophy. What precisely is meant by saying that Philosophy is the criticism of experience ?

2. What is meant by criticism as a method of Philosophy ? How is it related to Scepticism ?

3. Explain the meaning of idealism in Philosophy. Explain realism and idealism as metaphysical theories.

4. Analyse the idea of Causality. Examine the treatment of the category of causality by Hume and Kant respectively.

5. Explain critically the idea of Substance. How far does Kant's category of substantiality save knowledge from universal phenomenalism ?

6. How do you conceive the relation between self and the world ?

7. Give a critical estimate of the doctrine of evolution as an explanation of the origin of species.

8. Trace the growth of the idea of personality. Discuss the question as to how far the personality of man is consistent with the pantheistic conception of the Deity

9. Explain the nature of reason present in lower animals ? Discuss the bearing of this question on the problem of future life.

1936

PHILOSOPHY—PASS

First Paper—Psychology

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. Is Psychology a natural science ? It so, in what sense ? Is it absolutely necessary for Psychology to have a Metaphysical basis ? Fully discuss the question.

2. Is introspection impossible ? Fully discuss this question ? Discuss the merits and defects of the experimental method.

3. State the functions of nerve-cells and nerve-fibres. What are the different theories about the physiological process corresponding to consciousness of innervation ?

4. Is Attention absolutely necessary to Consciousness ? Discuss, explain and illustrate the different kinds of attention and give their laws.

5. Discuss the question whether distance can be seen. Analyse the mental process involved in saying 'I see a tree in front of me.'

6. Can the different laws of suggestion be reduced to the law. Discuss. How do Memory and Expectation agree with and differ from each other ?

7. Analyse Belief. What are the grounds or sources of Belief ? Discuss the relation of Belief to Knowledge.

8. Explain and examine the different theories of expression of feeling.

9. Does Feeling constitute a separate function of mind or are Knowing and Willing the only functions of mind ? Fully discuss. Are there neutral feelings ? Discuss.

10. Distinguish between appetite and desire, and between desire and volition. Explain and illustrate the different kinds of pre-volitional movement. In which of them do you find the source of voluntary movement ? Give reasons for your answer.

PHILOSOPHY—PASS

Second Paper—Ethics

*Candidates are required to give their answers in their own words as far as practicable.
Answer any five questions.*

1. Define the province of Ethics. Explain the relation of Ethics either to Psychology or to Metaphysics.

2. Analyse desire. Is Desire always and necessarily directed to Pleasure ? Discuss.

3. Carefully explain the essential characteristics of a voluntary action. How far do our habitual actions come under the scope of the moral judgement ?

4. What precisely is the meaning of Conscience according to the intuitionist school ? Compare the standard of conscience with that of prudence.

5. What is your own theory of moral obligation, and why do you prefer it ?

6. Does Pleasure admit of a *qualitative* distinction ? Discuss the question.

7. Either, How far does the conception of a *social organism* adjust the respective claims of the individual and society ?

Or, Furnish a brief critical examination of Kant's ethical theory.

8. Can the *moral* be evolved out of the *unmoral* ? Discuss. Briefly indicate the chief directions in which there has been moral progress.

9. What is meant by a conflict of duties ? Can such a conflict be transcended ? Is one justified in saving the life of a really innocent person by giving false evidence on his behalf ? Discuss.

PHILOSOPHY—PASS

Third Paper—General Philosophy

Candidates are required to give their answers in their own words as far as practicable.

Only five questions to be attempted.

1. Explain the aim and function of Philosophy. 'The philosophical conception of reality is characterized by the tendency to Monism.' Discuss this.

2. Examine the Parallelistic theory of the relation between Mind and Body.

3. Discuss fully Hume's theory of Causation, and state your own view with regard to the nature of Causality.

4. Explain clearly the meaning of Dogmatism and Scepticism in philosophy. How far does the critical method differ from them ?

5. Explain the concept of matter. How far can Materialism be a philosophical interpretation of the ultimate substance of the world ?

6. Explain the meaning of final cause. What do you understand by the teleological view of the universe ? How is it distinguished from a mechanical view ?

7. State clearly the problem of the relation between knowledge and faith.

8. Explain the conception of the soul. Give your reasons for belief in the future existence of the soul.

9. Explain clearly the meaning of the transcendence and immanence of God. Which of these two views is, in your opinion, more consistent with the common notion of worship ?

1937

PHILOSOPHY—PASS

First Paper—Psychology

Candidates are required to give their answers in their own words as far as practicable.

Answer any five questions.

The questions are of equal value.

1. Characterize Psychology as a science and indicate its relation to (a) the practical sciences, and (b) physiology. Is it correct to speak of the physical basis of mental life? If so, in what sense?
2. Discuss the merits and defects of the comparative method. Is there any method of psychology which is sufficient by itself? Discuss.
3. What do you understand by subconscious mental processes? Point out their positive and negative characteristics. Are there unconscious psychical processes? Discuss.
4. Describe the structure and function of muscles, and state and illustrate the different kinds of muscle-consciousness.
5. How is solidity perceived? How is it that we see object as single in binocular vision? Explain why, when the image of an object on the retina is an inverted one, we still see the object as erect.
6. Distinguish between perception and apperception, and indicate the different stages of the latter.
7. How are images distinguished from percepts? Distinguish between (a) hallucination and illusion, and (b) reverie and dream. How would you psychologically account for dreams?
8. Trace the development of feeling. What is the mental process involved in saying 'I feel sure that spiritual force will ultimately triumph'?
9. Distinguish between mood, emotion, and sentiment. Give the general characteristics of emotion. Analyse the aesthetic sentiment.
10. What are the points of agreement and difference between (a) reflex and instinctive actions and (b) instinctive and habitual actions? Can habits be changed? If so, explain the psychological process by which this can be done.

11. How can thoughts, emotions, and desires be controlled? Exhibit fully the psychological and physiological processes involved in each of these cases.

12. What are the factors of mental development? Is it correct to represent mental development as a biological process? If so, in what sense?

PHILOSOPHY—PASS

Second Paper—Ethics

Candidates are required to give their answers in their own words as far as practicable.

Answer any five questions.

The questions are of equal value.

1. Define the scope of Ethics, and distinguish in this connexion between *moral rightness* and *legal rightness*.

2. What place have induction and deduction in moral philosophy? Can rules of moral conduct be derived from the consent of mankind?

3. How are moral distinctions justified by the intuitionists and utilitarians respectively? Which view would you yourself profess, and why?

4. Discuss Hedonism as a moral theory, and distinguish in this connexion between psychological and ethical hedonism.

5. Define Utilitarianism, and give a comparative estimate of the Utilitarianism of Bentham and Mill.

6. Examine the following statements :—

(a) There are a few laws, a breach of which morality does not allow in certain circumstances.

(b) The Moral Law is valid unconditionally and universally, and does not admit of any exceptions.

7. Analyse the consciousness of obligation, and discuss the question whether obligation necessarily implies relation to a higher person as its source.

8. How is the individual related to society? Would you justify individual self-assertion against the established customs of society? Give reasons for your answer.

9. Write short notes on :—*duty, right, virtue, sanction.*

PHILOSOPHY—PASS**Third Paper—General Philosophy**

*Candidates are required to give their answers in their own words
as far as practicable.*

Attempt only five questions.

The questions are of equal value.

1. Explain clearly the position of Epistemology in relation to philosophy and metaphysics.
 2. Discuss how far the critical method in philosophy removes the defects of dogmatism and scepticism.
 3. Examine critically the theory of the *a priori* origin of the knowledge of space, time, and causality.
 4. Contrast the teleological with the mechanical explanation of the world.
 5. Explain the theory of parallelism between mind and body. How far is this consistent with the facts of interaction revealed in our ordinary experience?
 6. What do you understand by the transcendence and immanence of God? What is in your opinion the correct theory?
 7. Discuss the problem of freedom of the will from the point of view of human responsibility.
 8. Analyse the idea of the absolute and discuss how far it can be known by human mind.
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Calcutta University

B. A. PAPERS

1909

HISTORY—PASS

First Paper—History of Europe

Paper setters { M. Prothero, Esq., M.A.,
 { J. N. Dass Gupta, Esq., B.A.,
 { W. A. J. Archbold. Esq., M.A.,

History of Europe from the fall of Constantinople to the Treaty of Berlin.

Not more than eight of these questions should be attempted. All questions carry equal marks.

1. Trace the history of the French in Italy from the accession of Charles VIII to the death of Louis XII.
2. What do you know of Don John of Austria ?
3. What were the main provisions of the peace which closed the Thirty years' War ? What were the results of that War ?
4. Give a general sketch of the political divisions of Europe as settled by the Treaties of Utrecht.
5. Distinguish between Whigs and Tories. Give some account of the foreign policy of Walpole.
6. Write a brief account of the rise of Prussia up to the accession of Frederick the Great.
7. Write a life of Charles XII. of Sweden.
8. What were the main causes of the French Revolution ?
9. Show the importance of the Peninsular War. Name, in order of date, the chief battles which were fought in its course.
10. Trace the growth of Italian Unity from 1815.
11. Show, by the side of a sketch-map, the territorial change sanctioned by the Treaty of Westphalia.

HISTORY—PASS

Second Paper—History of England

GROUP A.

Any four of the following questions.

1. Remark on the popularity of the study of (a) Physical science, (b) Political philosophy during the earlier years of the Restoration.

2. Discuss the statement that the England of the Restoration was reflected in its king, Charles II.

- 3. 'With Danby began the system of direct bribery'. Remark on the circumstances which made the practice of corruption. And on what occasions and with what results was corruption resorted to between the Restoration and the Revolution?

4. Amplify the statement that "The fall of Clarendon marks a new epoch in the History of the Restoration."

5. Give some account of the trial and condemnation of (a) Caxter, (b) Ellizabeth Gaunt, explaining in each case the circumstances which led to the trial.

6. Write a short sketch of the career of the Earl of Shaftesbury, and give an estimate of his character and statesmanship.

GROUP B.

Any four of the following questions.

7. Say what you know of the Parliament of 1661—with special reference to (a) its composition, (b) its temper, (c) the political and religious results of its chief legislative measures.

8. Give some account of the part played by (a) Titus Oates, (b) Bedloe in connection with the Popish plot, and remark on the circumstances which predisposed the nation to believe in the existence of a plot. How far are we justified in saying that the Titus Oates led directly to the Exclusion Contest of 1680-81?

9. Explain the terms and indicate the circumstances which ended in the negotiation of (a) The Triple Alliance and (b) The Secret Treaty of Dover.

10. Discuss the statement that the acquittal of the Bishops was not the only event which makes the thirteenth of June 1688 a great epoch in history.

11. What were the considerations which induced Sir William Temple to formulate his scheme for the reform of the Privy Council?

Give some account of the scheme and explain its bearing on the development of the Cabinet.

12. Write a connected account of the dealings of James II with the Universities of Oxford and Cambridge.

HISTORY—PASS

Third Paper—History of India

Not more than Eight questions should be attempted

All Questions carry equal marks.

1. Hunter says 'the Aryans in India worshipped first as they feared then as they admired and finally as they reasoned.' Show how this is the key to the characteristics of the Hindu religion in the Vedic, Epic and Puranic ages.

2. How do we infer that the early Indian Aryans had no caste? How did caste originate?

3. Give some account of Jainism, and of its points of similarity with and difference from Buddhism. What places of India are chiefly famous in connection with Jainism?

4. Describe by a sketch map, the extent of Asoka's empire and name its principal viceroyalties.

Into what two classes do the inscriptions divide the nations not included in his empire?

5. Trace Hiuen Tsang's travels in India. What does he say about Nalanda, and into what five kingdoms does he divide Bengal?

6. Explain from the history of the times why Northern India was so easily conquered by Mahomed Ghorî and Baktiyar Khilijî.

7. What do you know of the Chola, Chera and Pandya kingdoms of Southern India?

8. What rebellions occurred and what independent kingdoms were founded during the reign of Mahomed Tughlak at Delhi?

9. Mention Akbar's fifteen Subahs, and describe his revenue system.

10. Sketch the policy pursued by the Moghal emperors towards the Rajputs from the time of Akbar to that of Aurangzeb.

11. Explain Elphinstone's statement in Mahomedan times the Law was independent of the state or rather the state was dependent on the Law.

12. Trace the fortunes of the Maharattas from the death of Aurangzeb down to the outbreak of the second Maharatta war with

the English. What did the Maharattas make of the nominal power of the Emperors at Delhi ?

13. Describe the foundation of the Kingdom of Mysore and the rise of Hyder Ali. Mention the principal events of his reign.

14. Sketch the history and results of the policy of non-interference on the part of the English with the Native states. What considerations led to its abandonment ?

15. Give some account of the worst famines in Indian history. Can you trace any distinction between those of earlier date and those which have occurred since the middle of the last century ?

1910

HISTORY—PASS

First Paper—History of Europe

(History of Europe from the fall of Constantinople to the Treaty of Berlin.)

1. Give a summary of the results of the fall of Constantinople.

2. Give some account (with a sketch map) of Italy at the time of Charles VIII's invasion.

3. Sketch in outline the struggle between England and Spain in the days of Elizabeth.

4. What were the causes of the thirty years' War ? Trace the part played by Gustavus Adolphus in it.

5. Write an account of the main issues between the King and Parliament in the days of Charles I of England.

6. Sketch the history of Spain under Philip IV.

7. Under what circumstances did the partition of Poland take place ? Give an account of the internal condition of that country before the first Parliament.

8. Why did the French invade Italy in 1706 ? Give an account of their policy there down to 1815.

9. Write brief notes on the following :—Alberoni, Cavour, Pombal, Turgot.

10. Give some account of the life and policy of Metternich.

11. Write a history of the Revolution of 1848 in France. Show how it led to the establishment of the empire by Napoleon III.

HISTORY—PASS**Second Paper—History of England**

1. Remark on the foreign policy of Charles II.
2. Amplify and discuss the following :—
 - (a) Clarendon's virtues and vices alike contributed to his ruin.
 - (b) For these reasons Clarendon was disliked by the Commons. For very different reasons he was equally disliked by the Court.
3. Say what you know of the repressive measures which followed the royal victory at Sedgemoor.
4. Give some account of the proceedings against Titus Oates on the accession of James II, and remark on the statement that the punishment which was inflicted upon him cannot be justified.
5. Say what you know of the London coffee house during the days of Charles II with special reference to the place they occupied in the social and political world of the time.
6. Discuss the accuracy of the statement that James II was a prince rash, indeed, and injudicious in the choice of his means, but intent on one of the noblest ends which a ruler can pursue, viz, the establishment of entire religious liberty,
7. Trace the course of events which led to the trial of the Seven Bishops, and discuss (a) the constitutional points at issue in the trial and (b) the effect which the trial produced on English national sentiment.
8. Write notes on—
 - (a) Julian Johnson and his book.
 - (b) Hugh Speake and the Irish Knight.
9. Account for the difference in the attitude of the country towards the Restoration and that towards the Revolution.

HISTORY—PASS**Third Paper—History of India****A**

1. Discuss the incidence and collection of revenue by the Government in (a) Ancient India, (b) Moghul India, and (c) British India.
2. (a) Summarise the general results of ancient Indian astronomy and chronology. Indicate how far these are confirmed by modern science and history.
- (b) Summarize the arrangements (i) of domestic and social life

and (ii) for administration and defence in the India of the Hindoo period.

3. Trace (a) the beginnings of the Arab incursion into India, (b) the fortunes of Mahmud of Ghazni, and (c) the achievement of the slave kings.

4. (a) Give some account of the vicissitudes through which Humayun passed, introducing into your narrative a picture of life in Mahomedan India in his days.

(b) Give a critical summary of the career of Aurangzeb.

B

5. Give some account of the various sources of Indian History. When may the historical period in India be said to begin? Give reasons for your answer. Briefly describe the states of Northern India at that time.

6. Give a narrative of the career of Chandra Gupta, describing his capital, his occupations, his army, and his public works. Summarize the connection of Bindusara with Egypt.

7. (a) What are the sources from which Indo-Parthian history is derived? Give some account of the leading Indo-Parthian rulers. Draw a map showing Parthia and the area of Parthian influence in India.

(b) To what extent was Greek influence felt in the Punjab in the third and second centuries B. C.?

8. Discuss four of the following topics:—(a) the reign of Harsha; (b) the relations of Nepal and Kashmir with early India; (c) the dynasties of Bengal; (d) the three kingdoms; (e) the white Huns; (f) the movements of the Sakas.

C

9. Give some account of the events by which the East India Company got a footing in Bengal and Madras, and ousted the French from South India.

10. (a) Summarize the events of Warren Hasting's administration. Discuss his subsequent trial.

(b) Discuss the leading measures carried by Lord Dalhousie; and estimate how far these, or any of them, were responsible for the Sepoy Mutiny.

11. Give in detail the steps taken to relieve Lucknow on two occasions. Describe the capture of Delhi, and the gradual regaining

of important centres that led to the re-establishment of British rule after the Mutiny.

12. (a) Give some account of the career of Sir John Lawrence, both in the Punjab and as Viceroy of India.

(b) Summarize the features of Lord Canning's administration.

1911

HISTORY—PASS

First Paper—History of Europe

1. Give some account of the reign of the Emperor Maximilian.
2. Sketch the history of the French in Italy during the reigns of Charles VIII and Louis XII.
3. Who were the Guises? Give some account of them in the 16th century.
4. What were the causes and the result of the Thirty Years' War?
5. Who were the Whigs? Give some account of their foreign and domestic policy in the 18th century.
6. Sketch the history of the rise of Prussia from the beginning of the 17th century to the accession of the Frederick the Great.
7. Show the importance of the Seven Years' war and give the main particulars of the peace which ended it.
8. Describe France before the Revolution. How far were the evils which then existed remedied?
9. Sketch the events of the year 1848 in Europe.
10. Trace the steps in the unification of Italy from 1815.

HISTORY—PASS.

Second Paper—History of England

1. Trace the growth of (a) Cabinet Government, and (b) Party Government during the reign of Charles II.
2. Compare the character of Charles II, with that of James II. Explain in this connexion the purport of the address of James II to the Privy Council at the commencement of his reign, and his subsequent attitude towards the address.
3. Write a connected account on the dealings of Charles II and James II with Lewis XIV of France.
4. Discuss the policy adopted towards the Puritans during the

first five years after the Restoration, and explain the circumstances which led to the passing of the Test Act.

5. Write a short note on the character and career of Sir William Temple, and say what you know of the plan of government associated with his name.

6. (a) Give some account of the trial and condemnation of Alice Lisle, and explain the circumstances which led to the trial.

(b) Discuss the constitutional points at issue in the case of Sir Edward Hales.

7. Explain the attitude of Dryden towards the question of his day.

8. Explain and examine the following statement :—

The system of Filmer might have survived the attacks of Locke ; but it never recovered from the death-blow given by James II.

HISTORY—PASS

Third Paper—History of India

GROUP A.

1. Write a note on the civil administration of India during the Maurya empire.

2. Narrate briefly the history of the Kushan dynasty in India. What led to its decay ? How far can the theory that the foreign rule of the Punjab during the third century belonged to this dynasty, be maintained ?

3. How far can King Harsha be said to have imitated Asoka ? Briefly describe his administration with regard to religion. What was the extent of his empire ?

4. Give an account of an Indian township of Village community.

GROUP B.

1. What were the visionary projects conceived by Mahomed Toghlaq ? What were the provinces lost to his dominion, and how were they lost ?

2. Narrate briefly the struggle between Sher Shah and Humayun in Bengal and Behar, showing clearly the effects of the natural features of the country upon the course of events.

3. Describe the part played by Nur Jahan and estimate the influence exerted by her in shaping the history of Jehangir's time.

What is Sir Thomas Roe's testimony with regard to the state of the country during her time ?

4. What was the policy of the Moghul emperors after Aurangzeb's death towards the Mahrattas : Trace the growth of the Mahratta influence in Northern India from 1760. What were the causes of failure in 1760 ?

GROUP C.

1. Describe the efforts made by the French to establish themselves as a European power in India from the time of the recall of Dupleix to that of the fall of Pondichery.

2. Give a short account of the system of administration during the time of Warren Hastings, with special reference to finance, revenue legislation, justice and provincial arrangements.

3. Account for the pacific attitude of Hyder Ali towards the British power originally. What led him to change it ? Give a short history of the Second Mysore War.

4. What were the changes effected by Sir John Lawrence in all branches of administration other than military ? Briefly state his policy with regard to the North-West frontier.

1912

HISTORY—PASS

First Paper—History of Europe

1. Estimate the consequences of the capture of Constantinople by the Turks.

2. Give some account of the foreign policy of England under Edward VI and Mary I.

3. What were the causes of the Thirty Years' War ? Give an account of the part played in it by Wallenstein and Mansfield respectively.

4. Give a short account of the Northern Kingdoms of Europe at the accession of Charles X of Sweden.

5. Sketch the foreign policy of Louis XIV upto the Treaty of Aix la Chapelle (1668).

6. Give some account of the French system of Government before the Revolution. How briefly, does it compare with that which we find under the first Empire ?

7. Give a sketch of the character of Frederic the Great. Estimate his abilities as a ruler and as a general.

8. Give a sketch of the history of Russia from the accession of Peter the Great to the peace of Aix la Chapelle.

9. What do you know of the State of Poland before the Partitions? Explain the motives for and the results of the Partitions.

10. Trace the history of the French Revolutions from the Assembling of the States General to the death of Louis XVI.

11. Explain the following statement:—

The Governments of the Holy Alliance devoted themselves to suppress with equal care the revolutionary spirit by which they had been threatened and the national spirit by which they had been restored."

12. Write a short essay on one of the following subjects:—

- (a) The democratic movement. (b) The Whigs. (c) Cavour.
(d) The importance of Spain in modern history.

HISTORY—PASS

Second Paper—History of England

1. Elucidate the statement that 'for the first time the English theory of the limited monarchy is translated into fact during the Victorian era'.

2. Say what you know of the Chartist movement—its aims and efforts.

3. Give some account of the administrative and fiscal reform of Peel, and justify the statement that he was essentially the minister of the business classes.

4. Tell the story of the Disestablishment of Irish Church.

5. Write brief notes on (a) the Orsini conspiracy, (b) the case of Governor Eyre, and (c) the federation of Canada effected in 1867.

6. Trace the career of Cecil Rhodes. Tell the story of the Jameson Raid, and give some account of the part which Rhodes played in this connexion.

7. Review the character and career of Lord Randolph Churchill, dwelling briefly and broadly on the part he played in the Conservative revival during the Parliament of 1880.

8. Illustrate and justify the following statements:—

In spite of failures and miscalculations, Gladstone's first adminis-

tration was the most fruitful, and on the whole the most successful, Liberal ministry of the queen's reign.

HISTORY—PASS

Third Paper—History of India.

GROUP A.

1. Give a short account of the various sources of Indian History. How far can the Puranas be regarded as preserving the most systematic record of Indian historical tradition? Fix the approximate date of the leading Puranas.
2. Describe the battle of the Hydaspes. Where, in your opinion, was the battle fought? Give reasons for your answer.
3. Sketch the rule of the Indo-Greek and the Indo-Parthian dynasties from 250 B. C. to 60 A. D. Discuss the Greek influence in India.
4. Write short notes on the following :—
 - (a) The Chalukyas.
 - (b) The Mahayana.
 - (c) The Arthashastra of Chanakya.
 - (d) Aorhos.
 - (e) The Rajput clans.

GROUP B.

5. Write an account of the Kings of the House of Ghazni from the death of Sultan Mahmud to the final expulsion of his dynasty into India. Contrast the invasions of Mahmud with those of Mahomed Ghori.
6. Of the internal state of the Mahomedan empire in India we have no means of obtaining more than a slight view. How far is this remark true? Describe the general state of the country as spoken of by the Nicolo di Conti (A. D. 1420). Sketch the usual methods of administration of a Mahomedan King.
7. It is to his internal policy that Akbar owes his place in that highest order of princes whose reigns have been a blessing to mankind.

Justify the above observation.

8. Sketch the career of Chin Kilich Khan.

GROUP C.

9. Describe the political condition of India in the year of the third battle of Panipat.

10. By what administrative measures did Lord Cornwallis consolidate the English power in India after the Mysore war ?

11. Write a short history of India from 1849 A. D. to 1856 A. D.

12. Write short notes on the following :—

- (a) Madhaji Sindia.
- (b) Tippoo Sultan.
- (c) Runjeet Singh.
- (d) Sir John Lawrence.

1913

HISTORY—PASS

First Paper—History of Europe

1. Write a short account of Charles the Bold. What do you understand by Burgundy ?

2. Give short but clear explanations of—

- (a) The Diet of worms (1521).
- (b) The League of Schmalkalde.
- (c) Calvinism.
- (d) The Augsburg Interim.

3. Give some account of (a) the dominions, and (b) the reign of Philip II of Spain.

4. Write a Sketch of the reign of Henry IV of France.

5. Describe the map of Europe in 1648.

6. Give some account of the rise of Russia upto the death of Peter the Great.

7. What political questions were decided by the English Revolution of 1688.

8. Give some indication of the rising importance of Colonial and maritime questions during the first half of the eighteenth century.

9. Write a short account of Frederick the Great. What did he do for Prussia ?

10. Sketch the history of Poland from the beginning of the eighteenth century to the final Partition.

11. Trace the history of the French Revolution from the death of Louis to the *Coup d'état* of the 18th Brumaire.

12. What were the causes of the various revolutions of 1848 ?

In what instances can those revolutions be said to have been successful?

13. Show how Italy became one state in the nineteenth century.

HISTORY—PASS

Second Paper—History of England

1. What do you understand by the *laissez faire* system? How far was this principle accepted in the methods of legislature in England at this period?

2. Sketch the political career of Lord John Russell.

3. Write a short account of the second Gladstone administration, noticing especially the lines of British policy in Egypt and the Soudan.

4. Write a short history of the life of the Charles Stewart Parnell.

5. Trace the history of the Liberal Party in England after 1886. How far has its policy been modified by the acceptance of labour politics and socialistic sentiments?

6. Estimate the contributions of Cobden and Bright to the cause of Free Trade in England. How far is the policy accepted in England at the present day?

7. Give a short sketch of the activities of the Fourth Party in Parliament.

8. Write short notes on:

(a) The 'Dan Pacifico' debate.

(b) The Pritchard affair.

(c) Jameson's Raid.

(d) The Factory Acts of 1844.

HISTORY—PASS

History of India—Third Paper

GROUP A.

1. What light does the code of manu throw upon the general principles of Government and the real state of manners in Ancient India?

2. Give account of the civic administration of Chandra Gupta Maurya with special reference to the works of public utility. What changes were wrought in the Indian administrative system between this period and that of King Harsha, as evidenced by Hieuen Tsang?

3. Trace the development of the Yuch-chi-supremacy in India upto the time of Kanishka. What were the relations between Rome, China, and India during this period? In what and for how long did the Chinese influence last in India.

4. What information can be elicited from the edicts of Asoka regarding (a) the social and moral condition of the times, (b) the extent of his dominions? Estimate Asoka's position as a religious propagandist, and compare him with Constantine.

GROUP B.

5. Account for the slow growth of Mahomedan influence in India up to the twelfth century. What were the circumstances which led Shahabuddin Ghori to invade India? Describe the nature of the resistance he experienced from the Hindus.

6. What were the principal Mahomedan Kingdoms at the time of the commencement of the Moghul Empire? State briefly the subsequent history of any two of them. Which of them gained independence under Mahomed Tughlak?

7. Narrate the attempts made by various parties to gain supremacy at Delhi between Nadir Shah's departure and 1761. What were the Mahratta plans and why did they fail?

8. Trace the rise of the Sikhs down to the accession of Ranjit Singh.

GROUP C.

9. Estimate the foreign policy of Warren Hastings, and discuss its merits and demerits as regards his dealings with Oudh and the Rohillas.

10. What were the evil effects of the dual administration consequent on the grant of Dewani to the Company? What were the successive changes made in the civil administration between 1769 and 1799?

11. State the causes of the last Mahratta War, and give a short narrative of its progress.

12. Discuss the policy of annexation pursued by Lord Dalhousie, and give in detail the circumstances of two principal annexations. What measures of his, if any, can be said to have been some of the causes of the Indian Mutiny?

1914

HISTORY—PASS

First Paper—History of Europe

1. Account for the expulsion of Francis I from Italy.
2. In what capacity did Charles V rule his various dominions and with what difficulties had he to contend in each part of the same?
3. What difficulties, other than religious, confronted Henry IV in 1598?
4. Compare the aims and career of Peter the Great and Charles XII of Sweden?
5. Outline the policy, domestic and foreign, of the great Elector.
6. What various motives led to the treaty of Belgrade, and what were its terms?
7. What were the reforms introduced by Joseph II, and why did he fail?
8. Sketch the events that led to the first Partition of Poland and estimate how far each of the partitioning powers was responsible for the event.
9. What were the original aims of the Holy Alliance, and what were its subsequent developments?
10. Compare the Revolution of 1830 with that of 1848 in France. State the events which led to the foundation of the Second Empire.

HISTORY—PASS

Second Paper—History of England

1. Describe the victory of Free Trade during Peel's administration.
2. What do you understand by the 'Eastern questions'? What settlement of the question was arrived at by the Treaty of Paris?
3. 'The death of Prince Albert was a graver loss to the nation than it knew.' Explain.
4. Sketch shortly the administrative reforms and foreign policy of the first Gladstone Ministry.
5. Write a brief history of Egypt and the Soudan in 1882-85.
6. What is meant by 'Home Rule'? What led Gladstone to propose it? Why did it create a 'Liberal Spirit'?
7. Sketch the character of Disraeli.
8. Write short notes on—
 - (a) The Trent affair.
 - (b) The Lorch Arrow debates.
 - (c) The Westmeath Act.
 - (d) The Phoenix Park murders.

HISTORY—PASS**Third Paper—History of India****GROUP A.**

1. Sketch, after Megasthenes, the system of Hindu administration during the time of the Mauryas. What light does Chanakya's Art of Government throw on this subject by way of corroboration of the Greek authorities, particularly with regard to the management of revenue and finance ?

2- What was the origin of the Gupta kings ? Describe the various conquests of Samudragupta and his relations with foreign powers. Who were the Western Satraps' and what were their relations with the Guptas ? Do you know of the existence of any form of Government, other than monarchy, in India during this time ? Cite instances, if any.

3. Narrate briefly the histories of the mediæval dynasties in Kasmir and Bengal from the beginning of the eighth century to the time of the Mahomedan Conquest.

4. Discuss the various theories relating to the origin of the different Rajput clans. Who were the Chalukya dynasty up to the time of the Rastrakuta Conquest.

GROUP B.

5. Write a note on the various systems of tenure existing in India at the time of the Mahomedan Conquest, including the system prevalent among the Rajputs. How far can this last be called feudal, and wherein does it differ from European feudalism ?

6 (a). Trace the fortunes of the Tughlak sovereigns of Delhi.

(b) Narrate the various struggles of Baber with the Indian princes after his conquest of Delhi.

7. Narrate briefly the steps taken by Akbar (a) to regain the Moghul ascendancy in Northern India ; and (b) to consolidate the various parts of his dominions. How far were his attempts at a religious compromise successful ?

8. What was the principal internal disturbance in Shah Jehan's reign ? Give a short account of his wars with Bijapore and Golcondah, and of the subsequent history of these kingdoms.

GROUP C.

9. Narrate briefly the events by which the English secured a footing in Bengal and Madras. What were the causes of the failure of the French to establish an empire in India ?

10. Discuss the relations between the East India Company and the Nizam from the fall of Dupleix to the treaty of 1786. Criticize the treaty of 1786. Give a short critical review of Bussy's career.

11. Summarize the principal events during the administration of the Marquess Wellesley in Central and Southern India. Indicate the course and result of the Second Mahratta War.

12. Estimate the valuable services rendered by Sir John Lawrence during the Mutiny. Review the policy during his Viceroyalty, both with regard to foreign affairs and revenue matters.

1915

HISTORY—PASS

First Paper—History of Europe

1. Describe the French invasions of Italy during the reigns of Charles VIII, Louis XII, and Francis I.

2. In what way did the character of Charles V influence the history of Spain and Germany?

3. Sketch the career of Philip II of Spain.

4. Give a summary of the history of the House of Vasa in Scandinavia till the death of Gustavus Adolphus.

5. Sketch the history of the War of the Spanish Succession.

6. Describe the rise of Prussia till the accession of Frederick the Great.

7. Give an account of the several partitions of Poland. What were the causes of these partitions?

8. What were the questions settled in the Congress of Vienna? How far were these settlements permanent?

9. Write a short history of the accomplishment of Italian unity.

HISTORY—PASS

Second Paper—History of England

1. Show the changes that took place in the constitutional position of the crown in Queen Victoria's reign.

2. Write a short essay on the educational development in Britain from 1837 to the end of the century. Mention the chief legislative enactments in this connexion.

3. Give the reason leading to, and show the importance of the Repeal of the Corn Laws.

4. Trace the development of the question of Home Rule for Ireland during queen Victoria's reign.

5. Write notes on :—

- (a) Chartism ;
- (b) The Federation of Canada ;
- (c) The Declaration of Paris.

6. Show the various development in the Eastern Question from 1875 to 1878.

7. Indicate carefully the causes which led to the first and second Boer wars. Outline also the terms of settlement of these wars.

8. Show the significance of :—

- (a) The bank Charter Act,
- (b) The Schleswig Holstein Question ;
- (c) The Battle of Tel-el-Kebir.

9. Write a short essay on British Colonial development during the nineteenth century.

HISTORY—PASS

Third Paper—History of India

GROUP A

1. Give a short account of Alexander's Retreat from the Punjab. What principal tribes did he come across during the retreat ? What arrangements did he make for the administration of the conquered country after his departure from India ?

2. What was the extent of King Harsha's dominion ? Give an account of the state of religion and the scope of the spirit of toleration during his reign.

3. Summarise either the history of the Pala and Sena Kings of Bengal or that of Kanouj up to the time of the Mahomedan invasion.

4. Write short notes on :—

- (a) The Lichchavis,
- (b) Bhabra Edict,
- (c) The Council of Kashmir.
- (d) The Paramaras of Malaya.

GROUP B

5. Discuss the idea of Monarchy as prevailed amongst the Hindus in the time of Manu. Give a sketch of the administration of Government in Ancient India as described by Manu.

6. What were the principal States of Northern India at the time of the invasion of Shahabuddin Ghori? What opposition did he meet with from them and why did it fail?

7. "His (Aurangzeb's) Government was a system of continual distrust." Criticize this statement of Elphinstone, illustrating your answer from the history of his reign. Give an estimate of his character.

8. Write a short note on the revenue system under the Hindus. What developments, if any, took place in it during Akbar's time?

GROUP C

9. Trace the origin and development of the Indian Judicial system during the administration of the East India Company.

10. Narrate briefly the principal events in the administration of Marquess Wellesely. Describe the second Marhatta war. What were its results?

11. Sketch the history of the Sikhs during the first half of the 19th Century.

12. (a) Criticize the foreign policy of Warren Hastings.

(b) Discuss the system of Subsidiary treaties.

1916

HISTORY—PASS

First Paper—History of Europe

1. Sketch the attempt of Caesar Borgia to unify Italy.
2. What events led to Luther's breaking with the Roman Church? Sketch his character and career.
3. 'Caraffa undertook to save the Church through the Papacy.' Indicate the methods inaugurated by him for the purpose.
4. Trace briefly the history of the League in France. Describe the character of the statesmanship of Henry IV of France.
5. Give the chief terms of the Treaty of Westphalia. What effect did the Thirty Years' War have [a] on Germany and [b] on Europe?
6. Sketch the character of Louis XIV.
7. Estimate the work of Peter the Great, illustrating your answer from the history of his reign.
8. Describe the reforms of Joseph II. How far were they successful?

9. Write a short history of France from the summoning of the States General (1788) to the end of the Monarchy.
10. Describe briefly the Peninsular War.
11. Write a short note on the year 1848 in Europe.
12. Criticize the career and policy of Cavour. How far, in your opinion, was he the creator of the United Italy?

HISTORY—PASS

Second Paper—History of England

1. Sum up the results of the Catholic Reaction in England, and show how Elizabeth dealt with the religious situation in the early years of her reign.
2. Give a short account of the life of Mary, Queen of Scots, from her accession to her imprisonment in Lochleven Castle, showing her position in the international politics of the day.
3. What were the claims of Mary, Queen of Scots, to the English throne? Examine the attitude of Elizabeth towards the Queen of Scots from the battle of Langside to Mary's death.
4. Give an account of Elizabeth's policy towards the Netherlands.
5. Show how the identification of Protestantism with patriotism saved England from Spain.
6. What were the effects of the defeat of the Armada, (a) on England, (b) on the rest of Europe?
7. Write short biographical notes on the following:—Sir Philip Sidney, Sir Francis Drake, Sir Walter Raleigh.
8. Write a short essay on English colonial enterprise in the time of Queen Elizabeth.
9. Give historical notes on the following:—The Massacre of St. Bartholomew's Day, The Casket Letters, The Martin Marprelate pamphlets, The Court of High Commission.

HISTORY—PASS

Third Paper—History of India

GROUP A.

1. Write a short history of the Andhra dynasty. What were the various foreign tribes with whom they came into contact? How long did the dynasty last?
2. Describe the various Hun migration into India. Who were the Gurjars? Discuss the origin of the Rajputs.

3. Give an account of the dynasties which came into prominence in the Deccan from the middle of the 6th century to 1318.

4. What are the materials from which ancient Indian history has been reconstructed ? Discuss the age of the Puranas.

GROUP B

5. Give a short account of the state of India at the time of Jehangir as depicted by Sir Thomas Roe.

6. "Akbar cannot claim the merit of originality for his doctrines." Discuss this statement of Elphinstone with regard to Akbar's ideas of religion.

7. Write a short note on either (i) the various schools of Hindu philosophy ; (ii) the knowledge in Astronomy and Mathematics, as prevailed in Ancient India.

8. What led to the downfall of the Moghul Empire in India ? What was the policy adopted by the Moghul Government towards the Mahrattas from Aurangzeb's death till the invasion of Nadir Shah ? What steps did Balaji Viswanath take to consolidate the Maharatta power during this period ?

GROUP C.

9. Give an account of the various administrative changes introduced by Lord Clive and also of his policy towards contemporary Mahomedan rules.

10. Discuss the administrative reforms introduced by Lord William Bentinck. What were his motives for non-interference in foreign affairs ?

11. What were the steps taken by the French to establish their supremacy in Southern India ? Why did they fail ?

12. Which were the native states annexed by Lord Dalhousie ? What led to their annexation ?

1917.

HISTORY—PASS

First Paper—History of Europe

GROUP A

1. Distinguish the Modern from the Mediaeval History of Europe in regard to her political and social condition.

2. Illustrate, from the history of Ferdinand and Isabella, the

unification of the Spanish monarchy and its expansion as a world power.

3. Briefly sketch the struggle between Charles the Bold of Burgundy and Louis XI of France. In what respects does the reign of Louis mark an epoch in the history of French monarchy?

GROUP B

4. What was the Schmalkaldic War? Attempt an estimate of the character and work of Maurice of Saxony.

5. How far was the revolt of the Netherlands due to causes other than religious? Give an estimate of the services of William the Silent in the cause of Dutch Independence.

6. Sketch the reign of the Philip IV of Spain, and account for the rapid decay of the Spanish empire.

GROUP C

7. By what measures did the *Great Cardinals* consolidate and strengthen the French monarchy? Give a brief estimate of the financial reforms of Colbert.

8. Briefly describe the parts played by (a) the great Elector, (b) Frederick the Great, (c) Stein, and (d) Bismark in the organization of the German Empire.

9. Who were the makers of Italian unity? Mark the steps by which the unification of Italy was accomplished.

GROUP D

10. What were the abuses in France in the time of Turgot? By what measures did he attempt to save the French monarchy, and why did he fail?

11. Illustrate, from the leading events in the career of Napoleon from the rupture of the Peace of Amiens to the Battle of Waterloo, the cause of the downfall of his power.

12. Write notes on the following:—the Council of Ten; the Battle of Lepanto, the Edict of Nantes; the Pragmatic Sanction; the Battle of Navarino; the Holy Alliance.

HISTORY—PASS

Second Paper—History of England

1. Examine the points of dispute regarding the succession of Elizabeth to the English throne, and show how the succession question affected the international politics of her reign.

2. What were the chief ecclesiastical difficulties confronting

Elizabeth at the beginning of her reign ? Give the main points of her Church Settlement.

3. Give a short account of the career of Mary, Queen of Scots, from her accession to her imprisonment in Lochleven Castle.

4. Sketch briefly the career of the Duke of Alva, in the Netherlands, and examine Elizabeth's policy towards the Netherlands.

5. Carefully analyse the attitude of Philip II of Spain towards England during Elizabeth's reign.

6. Write a short account of the rise of the Jesuits and their influence (a) in England, (b) in Ireland, in Elizabeth's reign.

7. Show the historical importance of the following :—The battle of Langside, Ridolfi's Plot, The First General Poor Law (1601), Holinshed's Chronicle.

8. Write biographical notes on three of the following :—William Cecil (Lord Burleigh), Robert Devereux (Earl of Essex), Edmund Spenser, Henry, Duke of Guise.

9. Write a short essay on English maritime enterprise in the times of Elizabeth.

HISTORY—PASS

Third Paper—History of India

GROUP A

1. Fix the chronology of the Sisunaga and the Nanda dynasties from such date as obtainable. Narrate briefly the history of India from the earliest historical times to the invasion of Alexander.

2. Mention the various Greek invasions of India after Alexander. What led to the downfall of the Indo-Greek Kings ? Estimate the extent of Hellenic influence in Ancient India.

3. Write a short sketch of the History of the Gupta emperors up to the time of the Hun invasion. What was the extent of the Gupta Empire during the reign of Samudragupta ?

4. Write short notes on :—

(a) Council of Kashmir ; (b) Legend of St. Thomas ; (c) The Chandels of Jejabhukti ; (d) The Yadvas of Devagiri.

GROUP B

5. (a). "The Hindus navigated the Ocean as early as the age of the Code, but it is probable that their enterprise was confined to a coasting trade." Discuss this statement. Give a short account of commerce and trade in ancient India.

(b) Write a short note on the system of agriculture prevailing in ancient times in India.

6. Trace the career of Baber. Give an estimate of his character as far as it can be gathered from his memoirs.

7. Describe the relations of the Rajputs with the Mogul emperors up to the time of Aurangzeb.

8. Give an account of Akbar's revenue system. Describe his administrative arrangements.

GROUP C

9. Discuss the foreign policy of Warren Hastings. What were the various difficulties he had to encounter during his administration ?

10. Sketch the history of the relations between the East India Company and the Maharattas from 1772 to 1818.

11. What are the main features of the permanent Settlements of Bengal introduced by Cornwallis? Criticize the measure and compare it with the land settlements introduced in other provinces about the same time.

12. What led to the First Sikh War ? Trace the progress of the war. What was the system of government introduced in the Punjab after the war.

1918

HISTORY—PASS

First Paper—History of Europe

1. Give a short history of Florence under the Medicines with special reference to their domestic and foreign policy.

2. Explain the importance of the family alliances of Ferdinand the Catholic in promoting the unity of Spain and its development as a European power.

3. Briefly sketch the history of the Turkish power from the death of Solymn the Magnificent to the Treaty of Carlowitz, and indicate the causes of its decay.

4. Describe the circumstances which led to the accession of Henry of Navarre to the French throne. Discuss the merits of the economic and financial reforms of the Duke of Sully.

5. Compare Charles XII and Peter the Great as generals and

statesmen. How far may Peter the Great be regarded as 'the creator of Modern Russia' ?

6. What led to the First Partition of Poland ? How far was it due to internal anarchy, how far to the ambition of foreign powers ?

7. Form an estimate of the character and aims of Mirabeau and account for his failure to realize his ideal.

8. Characterize in some detail the Napoleonic system of government, and show that it was but a survival of the old regime of France.

9. Explain the character and importance of the reforms effected in Prussia after the battle of Jena by Stein and his colleagues.

10. Add a full note to each *one* of the following :—(a) the Inquisition ; (b) the treaty of Westphalia ; (c) the Pragmatic Sanction ; (d) Committee of Public Safety ; and (e) the Sonderbund.

HISTORY—PASS

Second Paper—History of England

1. What were the chief Provisions of the Second Act of Supremacy and the Third Act of Uniformity of 1559 ? State the religious difficulties that these Acts were meant to overcome.

2. Examine the foreign relations of Elizabeth with Spain, France, and Scotland during the first five years of her reign.

3. Give a short account of the career of William of Nassau, Prince of Orange.

4. Examine the purposes of, give an account of, and estimate the results of the following plots :—Ridolfi's Plot ; Throgmorton's Plot.

5. Give an account of the risings of Desmond and Tyrone in Ireland. Give also a general account of the part played by Ireland in the Roman Catholic schemes against Elizabeth.

6. Estimate the international importance of the various marriages of Mary, Queen of Scots.

7. Write historical notes on the following :—the Treaty of Cateau Cambresis ; the murder of Darnley ; the Peace of St. Germain ; the Massacre of St. Bartholomew's Day.

8. What is the import of the phrase 'The spacious times of Queen Elizabeth' ? Give short notes on Edmund Spenser, Christopher Marlowe, Sir Francis Bacon, and Sir Francis Drake.

9. Give an estimate of the character of Queen Elizabeth.

HISTORY—PASS**Third Paper—History of India****GROUP A**

1. Trace the progress of Alexander's Campaign in India up to his arrival at the Hyphasis. Discuss the various theories about the site of Aornos.

2. Write a short note on the municipal and revenue administration of Chandragupta Maurya.

3. (a) Describe the relations of China with India during the period from the first century to the reign of Harshavardhan.

(c) Give a short account of the Kushan dynasty in India.

4. What are the sources of southern Indian history? Narrate briefly the history of the "Three Kingdoms".

GROUP B

5. The village communities are little republics, having everything they can want within themselves, and almost independent of any foreign relations. Discuss this statement of Metcalfe. Describe an Indian village community.

6. Give a short account of the various Mahomedan dynasties of the Deccan.

7. Describe the internal state of India during the time of the Moghuls. Give an account of Sir Thomas Roe's embassy to Jehangir and his impressions about India.

8. Who were the Scind brothers and what part did they play in Moghul politics in the eighteenth century? Narrate briefly the history of the relations of the Maharattas with the Moghul emperor from 1707 to the third battle of Panipat.

GROUP C.

9. Write a short note on development of the Indian administrative system during the time of the East India Company. When was its Charter renewed and what changes did the renewals of its Charter bring about?

10. Sketch the relations of the East India Company with the Kingdom of Oudh up to the time of its annexation.

11. Discuss the foreign policy of the Marquess of Hastings. Write a short history of his administration.

12. Write short notes on—

(a) Fox's India Bill;

- (b) Thomson's land settlement ;
 - (c) The affair of William Palmer & Co.
 - (d) Malcolm's Mission to Persia.
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1919

HISTORY—PASS

First Paper—History of Europe

A

1. How was the Republic of Venice in the sixteenth century affected by the advance of the Turks in Eastern Europe? What were the causes of her decay and fall.

2. What do you mean by the Counter Reformation? By what methods was it carried out? What was the extent of its success?

3. How far was the Revolt of the Netherlands due to causes other than religious? Attempt an estimate of the services of William the Silent to the cause of Dutch Independence.

B

4. Briefly sketch the external history of Sweden from the accession of Gustavus Adolphus to the death of Charles XII, and account for the decline of Swedish greatness.

5. Describe the parts played by England and Holland in resisting the establishment of Louis XIV's supremacy over Europe. How far was the 'Balance of Power' secured by the Treaty of Utrecht.

6. Account for the great change in international relations in Europe at the commencement of the Seven Years' War. Explain the importance of the Convention of Westminster in connection with the war. To what extent was the war influenced by commercial interests and colonial ambitions?

7. What were the abuses in the system of government in France at the time of Turgot? Give an estimate of the various measures of reform by which he proposed to save the French Monarchy and account for his failure to carry them out.

8. Trace the progress in the movement towards the unification of Italy from the fall of Napoleon to the Revolution of 1848, and show how far the principle of nationality helped in the formation of the kingdoms of Greece and Belgium. Compare the policy of Cavour with that of Bismarck.

9. Add a note to *each one* of the following :—

(a) Janissaries, (b) Don John of Austria, (c) Wallenstein, (d) the 18th of Brumaire, (e) the Jansenists, (f) the Lines of Torrest Aedras, (g) the Holy Alliance, and (h) the Treaty of San Stefano.

HISTORY—PASS

Second Paper—History of England

1. What dangers faced Elizabeth on her accession to the throne, and how did she overcome them ?

2. Examine the circumstances which led Elizabeth to consent to the execution of Mary, Queen of Scots. What were the results of Mary's death ?

3. Give a short account of the rise of the Jesuits, and show the part played by them in Elizabeth's reign.

4. What causes led to the formation of the League ? Show how far it accomplished its purposes.

5. Give in outline, (a) the causes, (b) the course, (c) the results, of the Armada.

6. State the historical significance of :—(a) the Treaty of Edinburgh ; (b) Ridolfi's Plot ; (c) the 'War of the three Henrys' ; (d) Howard's Expedition against Cadiz.

7. Give a short account of Alva's career in the Netherlands.

8. Write historical notes on :—(a) The Earl of Leicester ; (b) Bothwell, (c) Lord Burleigh.

9. Write a short Essay on the cause of the literary activity in the time of Elizabeth.

HISTORY—PASS

Third Paper—History of India

GROUP A

1. Classify the inscriptions of Asoka. Give a short account of the Rock edicts. What were the scripts used in them ?

2. Give an account of the Sunga and Kanva dynasties. Fix the date of Menander's invasion, discussing the various theories put forward in this connexion.

3. Write a short history of mediaeval Nepal and Kashmir.

4. Discuss the origin of the Rajput clans. Write short notes on the Kalachuris of Chedi and the Paramaras of Malwa.

GROUP B

5. Describe, after Manu, the administration of Government in ancient India, and the principles of foreign policy generally followed during these times.

6. Draw a sketch map of India showing the principal Mahomedan states in India at the time of Babar's invasion.

7. Estimate the character of Shah Jehan. Give an account of the chief events of his reign. Describe the state of India during his time.

8. Trace the rise and growth of the Sikhs up to the time of Ranjit Singh.

GROUP C

9. Estimate the foreign policy of Marquis Wellesley. Give an account of two of the principal wars during his administration.

10. Narrate briefly the early struggles of the English to gain the supremacy in the Carnatic.

11. What led to the Indian Mutiny? Give an account of its progress and ultimate suppression.

12. Write short notes on—

- (a) Clive's dual government :
- (b) Treaty of Purandhar :
- (c) Charter of 1833 ;
- (d) Dalhousie's doctrine of Lapse.

1920**HISTORY—PASS****First Paper—History of Europe**

1. Explain the notable features that mark the transition from the middle ages to the modern.

2. State clearly the circumstances that led to the revolt of the Netherlands.

3. State the policy of Peter the Great and describe his conflict with Charles XII of Sweden.

4. Give the causes of the Seven Years' War and discuss its results.

5. Give an account of the second and third partitions of Poland.

6. Write brief notes on any *three* of the following :—(a) Dubois, (b) Ripperda, (c) Kaunitz, (d) Pombal.

7. Discuss the causes that led to the French Revolution.
8. Trace the history of the 'Near Eastern Question' from the treaty of Kutschuck Kainardji (1774) until 1878.
9. Describe the political settlement effected by the Congress of Vienna (1814-15).
10. Draw a sketch map showing the position and extent of Napoleon's Empire and its dependent States in 1810.

HISTORY—PASS

Second Paper—History of England

- 1. Discuss the truth of the statement: The English of Elizabeth's reign had suddenly, as it seemed, developed a new and aggressive maritime.
2. Give an account of the economic condition of England during the time of Queen Elizabeth.
3. Describe the attitude of Elizabeth towards Ireland.
4. Justify or condemn the execution of Mary Stuart.
5. Give an estimate of the character and statesmanship of William Cecil Lord Burleigh.
6. Trace the course of events which led Philip II of Spain to pass from friendship for Queen Elizabeth to open hostility.
7. To what extent was Elizabeth's character reflected in her ecclesiastical and foreign policy?
8. Describe the leading features of Elizabeth's policy towards the Catholics.
9. Add full notes to any *three* of the following:—
(a) The Casket Letters. (b) Holinshed's Chronicle. (c) The Bull of Pope Pius V (1570). (d) The Seminary Priests. (e) The Council of Trent. (f) The Norfolk Conspiracy.

HISTORY—PASS

Third Paper—History of India

1. Give an account of the political condition of India from the times of Buddha to the rise of the Muryan Power.
2. Describe the maritime activities of ancient India as gathered from the Periplus of the Erythraean Sea'.
3. Trace the growth and decline of the Gupta Power. Summarize Fa Hian's account of the internal condition of the Gupta Empire.
4. Give an account of the Chalukya Power.

5. Mention the causes that prevented the conquest of India by the Arabs.
 6. Give an account of the reign of Firoz Tughloq and indicate the causes that led to the downfall of the Pathan Empire.
 7. Describe the social and economic condition of the Moghul Empire in the seventeenth century as gathered from the accounts of European travellers.
 8. Compare the position of the English in India in 1785 with that in 1805. Illustrate by a sketch map their territorial possessions at these respective dates.
 9. Give a short account of the different forms of land settlement in British India.
 10. Trace the rise and fall of the Mahratta Confederacy.
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1921

HISTORY—PASS

First Paper—History of Europe

1. Estimate the results of the discovery of America by Columbus.
2. What was the relation between the Renaissance and the reformation?
3. The direct and indirect consequences of the protracted combat between Francis I and Charles V of Spain were many and far-reaching; Elucidate.
4. Explain the importance of the Peace of Westphalia in the history of Europe.
5. 'Richelieu is sometimes called the creator of absolute monarchy in France.' Discuss.
6. 'Peter the great was a barbarian of genius—never anything more.' Explain.
7. What is your estimate of Frederic the Great as an enlightened despot?
8. What is the importance of the English Revolution of 1688 in the history of Europe?
9. 'Long before the Revolution of 1789, there had occurred a revolution in the world of ideas.' Elucidate.
10. Give a short account of the 'Reign of Terror' (1793) in France.

11. Napoleon was one of the greatest social reformers of world.' Amplify.

12. The spirit of the monarchical restoration of 1815 was incarnate in the celebrated Austrian minister, Metternich.' Discuss. .

13. Give a short sketch of the foreign policy of Napoleon III.

14. 'Cavour was the real maker of modern Italy.' Do you agree ? Give reasons for your answer.

15. 'Bismarck was one of Germany's greatest sons, the greatest since Frederick the great or Luther'. Expand.

HISTORY—PASS

Second Paper—History of England

1. What were the peculiar difficulties which Elizabeth had to face at her accession to the throne ? Indicate the sources of her strength which enabled her successfully to fight with those difficulties.

2. In what respects was Elizabeth's theory of Church and State different from Scottish Calvinism ? Explain the motives which induced her to send help to the Lords of Congregation.

3. Explain the international importance of Scotland in the latter half of the sixteenth century.

4. Briefly state the religious and political causes of the war between England and Spain in Elizabeth's reign. Estimate the effect of the defeat of the Armada on (a) England, (b) France, and (c) the Netherlands.

5. Indicate the parts played by the following characters in English history :—(a) Parker, (b) Drake (c) Walsingham, and (d) Cecil (Lord Burleigh).

6. Account for the growth of commerce and industry in England towards the close of the sixteenth century. How far may Elizabeth be said to have been the founder of modern England ?

7. 'A defensive alliance with France was the corner-stone of Elizabeth's foreign policy. Justify the statement, and characterize Elizabeth's diplomatic relations with Spain, France, and the Netherlands

8. Explain the policy of the Tudors towards Ireland, with special reference to the reign of Elizabeth.

9. Explain the causes of the growing independence of the House of Commons in Elizabeth's reign and briefly describe the relations

between the Crown and Parliament towards the close of the prescribed period.

10. Compare the England of 1558 with the England of 1603.

HISTORY—PASS

Third Paper—History of India

1. What are leading principles of Asoka's Dhamma or law of Piety.
2. Review the career of Pushpamitra and Kanishka.
3. Give a short account of the Pala and the Sena dynasties.
4. Sketch the history of the Chola kingdom.
5. Trace the rise and fall of the Bahmani kingdom and its offshoots.
6. Describe Akbar as a man and a ruler.
7. Sketch the history of Mewar from the beginning of the fourteenth to the end of the seventeenth century.
8. Sketch the history of Mysore during the second half of the eighteenth century.
9. Write notes on the 'Subsidiary System' and the 'Doctrine of Lapse.'
10. Review the Afghan policy of Lord Auckland.

1922

HISTORY—PASS

First Paper—History of Europe

Six questions only are to be attempted.

1. What were the causes of the Reformation? What were its results?
2. 'Few persons will deny Martin Luther a first place among the great men of the sixteenth century.' Discuss.
3. 'The unification of Spain inaugurated a period of territorial expansion which is unparalleled in history.' Expand.
4. 'The Peace of Westphalia is a prominent landmark not only in German but in universal history.' Amplify.
5. Give an estimate of the services rendered to monarchy in France by (a) Henry IV. (b) Richelieu, and (c) Mazarin.
6. 'Under Louis XIV France was absorbed in the Court, and the Court in the king.' Explain.

7. 'Oliver Cromwell is one of those surprising characters who sum up in themselves a whole period of their nation's history'. Examine.

8. 'The great result of the reign of Frederick the Great was that he created the dualism between Austria and Prussia.' Expand.

9. What 'led to the 'partitions' of Poland? What were their effects?

10. 'Fiscal causes lay at the root of the French Revolution.' Illustrate.

11. Analyse the causes of Napoleon's downfall.

12. As for Germany, the Napoleonic wars had been a blessing in disguise'. Explain.

13. How far is it true to say that the Congress of Vienna (1815) violated the principle of Nationality?

14. Give an account of the French Revolution of 1848.

15. Attempt an estimate of the parts played by (a) Victor Emmanuel II, (b) Cavour, (c) Garibaldi, (d) Mazzini in the struggle for Italian unity.

16. Explain the importance of the 'Near Eastern Question' in the history of Europe in the nineteenth century.

HISTORY—PASS

Second Paper—History of England

1. 'During the whole of the reign, Ireland had been a cause of trouble and anxiety. Elizabeth's treatment of that unhappy country was not more creditable or successful than that of other English statemen before and after her.' Discuss.

2. Explain the significance of the Treaty of Cateau Cambresis. What were the principal possessions of Spain at that time?

3. Account for the coercive policy of Elizabeth against the Catholics and state the main provisions of the Act of Uniformity (1559).

4. Analyse carefully the relations between England and France from the beginning of Elizabeth's reign to 1587.

5. State the causes and effects of the Elizabethan naval war with Spain.

6. Estimate the character and statesmanship of Sir William Cecil (Lord Burghley).

7. Can you justify the treatment of Elizabeth towards Mary?

Queen of Scots ? What were the consequences of Mary's execution on international affairs ?

8. Give an account of the economic condition of England during the latter half of the sixteenth century ?

9. Write full historical notes on any *four* of the following :—
(a) The Casket Letters (b) Ridolphi Conspiracy, (c) Babington Plot, (d) the Guises, (e) Bill of Excommunication, 1570, (f) Throgmorton's Plot.

HISTORY—PASS

Third Paper—History of India

Only six questions to be attempted.

1. What are the indigenous sources of Hindu history ? How do you explain the absence of Hindu historical literature ?

2. Briefly explain the views of Vincent Smith on the origin and development of the Caste system.

3. Write a brief note on the sea-borne trade of ancient India.

4. Briefly narrate the history of the Gupta and Pratihara empires.

5. Sketch the history of Bengal from A. D. 1340 to 1576.

6. Describe the rise and fall of the kingdom of Vijaynagara.

7. What do you know of Sher Shah and his government ?

8. Give a short sketch of the Maharatta history from A. D. 1761 to 1805.

9. Write a critical note on the policy and character of Warren Hastings.

10. Give a critical account of the British policy towards Oudh.

1923

HISTORY—PASS

First Paper—History of Europe

1. Explain the connexion between the Reformation and the Renaissance.

2. Give an account of the geographical discoveries of the fifteenth and the sixteenth centuries.

3. The humanists helped to prepare the minds of people for the Reformation but they did not make it. Discuss.

4. From a Spanish national point of view it was a great

misfortune that Charles I was elected to the Empire in 1519 and became the Emperor Charles V. Why?

5. Give an account of the causes of the struggle between King and Parliament in England during the Stuart Period.

6. The peace of Westphalia is the turning point in the destinies of Civilization. Expand.

7. Give an estimate of the character and the statesmanship of Peter the Great of Russia.

8. Attempt an estimate of the services rendered to monarchy in France by (a) Sully, (a) Colbert, (c) Turgot.

9. 'Frederic William I was the greatest internal King of Prussia' Amplify.

10. 'The French Revolution inaugurated a new era not only for France but for the whole world.' Illustrate.

11. Briefly review the parts played by (a) Mirabeau, (b) Danton, (c) Robespierre in the history of the French Revolution.

12. In what sense is it true to say that (a) France, (b) Germany, and (c) Italy owe their salvation to Napoleon?

13. Estimate the importance of the July Revolution of 1830 on the history of Europe.

14. Bismarck will rank in history as one of the few great founders of States.' Discuss.

15. Briefly indicate the nature of the policy adopted by (a) England, (b) France, and (c) Russia towards the Turkish Empire during the nineteenth century.

HISTORY—PASS

Second Paper—History of England

1. Discuss the personal character of Elizabeth with special reference to the remarks of Green and Creighton.

2. Give a short account of the life and Literature in England during the reign of Elizabeth.

3. Describe the maritime and trade activity of Englishmen during the Elizabethan period.

4. Sketch the activity of the Jesuits in Elizabeth's time.

5. Elucidate the following :—"The great question decided in the sixteenth century was that States might exist without submitting to the papal jurisdiction ; and England was the country on which the fate of Protestantism depended".

6. Criticize, in the light of Bessley's remarks, the policy of Elizabeth in withholding vigorous support from the Huguenots and the revolted Dutch.

7. Describe the Irish policy of Elizabeth.

8. Discuss the principles underlying the grant of monopolies in Elizabeth's time.

9. What were the chief causes of the failure of Mary Stuart as a ruler ?

10. Write notes on *two* of the following :—(a) the Alencon Marriage, (b) the Poor Law, (c) the Earl of Essex.

HISTORY—PASS

Third Paper—History of India

1. Institute a brief comparison between the imperial and religious policy of Asoka and Akbar.

2. (a) Sketch the history of the Chalukya princes up to the time of the Rastrakuta Conquest.

(b) Discuss the origin of the Rajput clans.

3. Describe the political condition of Southern India during the opening centuries of the Christian era, with a special reference to the history of the "Three Kingdoms".

4. Compare Hindu India immediately before the Muhammadan invasion with Mughal India on the eve of the English Conquest.

5. What was the policy adopted by the Mughal Government towards the Hindu Princes from the death of Akbar to the invasion of Nadir Shah ?

6. Give a short account of the economic condition of India during the latter half of the sixteenth century as gathered from the writings of European travellers.

7. Sketch the history of the Mahratta Confederacy from the Treaty of Sulbui to the Third Mahratta War.

8. Account for the failure of the French to establish an empire in India, and give an estimate of Count de Lally's character.

9. Why was the Permanent Settlement effected in Bengal ? What are its advantages and disadvantages ?

10. Write short notes on *two* of the following :—(a) the Rohilla War, (b) Pitt's India Act of 1784, (c) the Regulating Act of 1773, (d) the Doctrine of Lapse.

HISTORY—PASS

First Paper—History of Europe

1. 'The Renaissance gradually displaced in the minds of men the mediaeval conceptions of the state, of society, of nature, of art and philosophy.' Elucidate.
- 2. Give a brief account of the political condition of Italy on the eve of Charles VIII's invasion.
3. To what causes would you attribute the success of the Reformation movement in Germany?
4. 'It is curious that Philip II whom the Spaniards esteem so highly should stand before the rest of Europe as the darkest tyrant and the most persisted enemy of light and progress whom the age produced.' Discuss.
5. 'To this day Henry IV is dear to the French people and his popularity has never been eclipsed by that of any of his successors'. Why.
6. 'The great question of the Reformation was the first question that confronted Elizabeth.' How did she attempt to solve that question?
7. Estimate the importance of the parts played by—(a) Wallenstein, (b) Tully, (c) Gustavus Adolphus, and (d) Richelieu in the Thirty Years' War.
8. 'Charles XII of Sweden was a Don Quixote promoted to a throne.' Do you agree?
9. 'Catherine the Great and Peter the Great claim the honour of having lifted Russia almost without aid, and often in spite of herself, to her present position'. Expand.
10. 'The great result of Frederick the Great's reign was that he created the dualism between Austria and Prussia and the mutual jealousy of these two states is the central theme of German history for over a hundred years.' Develop.
11. 'The French Revolution has been frequently ascribed to the influence of the "philosophers" or the writers of the eighteenth century. This is putting the cart before the horse.' Do you agree?

12. How do you account for the excesses committed during the French Revolution ?

13. Give a rough idea of the empire of Napoleon at the height of his power.

14. Give a brief account of the Holy Alliance. Why did it fail to achieve its purpose ?

15. Estimate the importance of the Paris revolution of 1848 on the History of Europe.

16. Briefly review the parts played by—(a) Cavour, (b) Mazzini, (c) Garibaldi, and (d) Victor Emmanuel II in the unification of Italy.

HISTORY—PASS

Second Paper—History of England

Only six questions to be attempted one being taken from Group A, two from Group B, and three from Group C.

GROUP A.

Attempt any one of the following :—

1. 'It may be said that no other sovereign was more recklessly devoted to peace than Elizabeth. If not "peace at any price" yet "peace at any price short of throne, one life, was her maxim."

Explain and comment upon professor Seeley's views about Elizabeth's policy of peace' as enunciated above.

(2) (a) "I sent my ships against men," said Philip. "not against the seas." It was nobler tone that England owned her debt to the storm that drove the Armada to its doom.'

Attempt a critical account of the Spanish expedition in the light of the above conflicting remarks, and estimate the effects of its failure on English and European politics.

GROUP B.

Attempt any two of the following :—

3. 'Scarcely any English sovereign has been exposed at the moment of accession to such dangers as was Elizabeth.'

Explain the above statement of professor Seeley with special reference to his views about the 'peculiar nature.'

4. 'As yet the interest of Elizabeth's reign had been political and material. But from the moment when the Armada drifted back broken to Ferrol, the figures of warriors and statesmen were dwarfed by the grander figures of poets and Philosophers'. Explain.

5. Review the careers of Sir Francis Drake and Sir Walter Raleigh, bringing out clearly how many of the characteristics of modern England seem to begin with them.

6. Trace the course of events that led to the execution of Mary. What special features of Elizabeth's character do you notice in her general attitude towards the Scottish queen and her conduct in connexion with the execution?

GROUP C.

Attempt any **three** of the following :—

7. Discuss the measures adopted by Elizabeth towards the settlement of the Irish question. How far were they successful in restoring peace and order in Ireland?

8. What is meant by counter Reformation? How far did it affect the history of England during the reign of Elizabeth.

9. Give an account of the growth of English commerce and manufacture during the reign of Elizabeth.

10. Trace the political development of the English during the reign of Elizabeth.

HISTORY—PASS

Third Paper—History of India

Attempt any **six** questions.

1. Give a short account of Kaniska's conquests and the extent of his dominions. Why is his reign specially celebrated in Buddhist ecclesiastical history?

2. What are the various sources from which we can learn of the commercial activities of Ancient India? Estimate their relative value.

3. What was the state of Buddhism during the ascendancy of the Gupta kings? Write a short note on the Hindu revival under the Guptas.

4. Sketch the career and character of Ala-uddin Khilji. What were the causes of the downfall of the Pathan Empire in India?

5. Narrate briefly the origin, rise, and fall of the Bahamanî Kingdom.

6. 'Akbar's revenue system only carried the previous system into effect with greater precision and correctness.' Discuss the statement.

7. Describe briefly the relations between the French and the English in Southern India from the recall of Dupleix to the Siege of Pondicherry.

8. Give a brief sketch of the revenue administration in India under the East India Company.

9. To what causes do you attribute the decay of the Maharatta Powers? State the relations of the Maharatta princes with the English in the first half of the nineteenth century.

10. Sketch the life and estimate the work of Ranajit Singh.

1925

HISTORY—PASS

First Paper—History of Europe

1. Estimate the importance of the geographical discoveries of the fifteenth and the sixteenth centuries on the history of Europe.

2. Account for the rapid success of the Reformation movement in Germany. Why did it practically fail in France?

3. The religious wars of Philip II were not altogether his fault; they were as much forced upon him by Protestant aggression and the logical progress of events, as determined by his own Catholic impulses. Do you agree?

4. 'The great question of the Reformation was the first question that confronted Elizabeth.' How did she attempt to solve that question?

5. 'To this day King Henry IV is dear to the French people.' Why?

6. 'Oliver Cromwell reaped failure at home but he added triumph to triumph abroad.' Develop.

7. The work of Richelieu cleared the way for the supremacy of France in Europe. How?

8. Give a sketch of the map of Europe in 1648 roughly pointing out the territorial adjustments of the Peace of Westphalia.

9. Carlyle calls Frederick the Great the last of Kings. He was not the last in name but there was none after him as great as he. Do you agree?

10. Was there any justification for the three partitions of Poland?

11. The Emperor Joseph II was none of the most pathetic figures in history.' Why?

12. How far, if at all, do you think was Louis XVI responsible for (a) the outbreak of the French Revolution and (b) the excesses committed thereunder?

13. Napoleon Bonaparte was one of the greatest social reformers of the world. Do you agree.

14. Give a connected account of Napoleon's campaigns against Austria.

15. Illustrate by the aid of a sketch map the territorial adjustments of the Congress of Vienna 1815.

16. Analyse the causes of the decline of the Turkish power in Europe.

17. Do you regard the nineteenth century as a 'new age in history'?

18. Narrate the story of the unification of Italy.

HISTORY—PASS

Second Paper—History of England

1. Explain the religious policy of Elizabeth and indicate the extent to which it was influenced by political considerations.

2. 'Neither religiously nor politically indeed had Elizabeth any sympathy with the Scotch Lords.' Explain Elizabeth's policy towards Scotland during the regency of Mary of Guise in the light of the above remark, and estimate the results of that policy.

3. Explain the political significance of the marriage of Queen Mary to Lord Darnley and its effect on England and Scotland.

4. What do you know of the revival of Parliamentary independence during Elizabeth's reign.

5. Estimate the influence of Spain in English and Scotch politics during the reign of Elizabeth.

6. Discuss the general features of the foreign policy of Elizabeth in the light of Seeley's remarks, 'and criticize Seeley's estimate of her statesmanship.

7. 'The *Faerie Queen* expressed indeed the very life of the time.' Discuss.

8. Write critical notes on the following :—

(a) Development of English historical literature during the period.

(b) Political outlook in Shakespeare's plays.

HISTORY—PASS**Third Paper—History of India.****GROUP A.**

1. Briefly describe the civilization and the administrative system of the Maurya Empire. Enumerate the sources of our information.
2. Describe Asoka as a religious reformer and propagandist. Classify his inscriptions.
3. Write a short account of the Kushan Dynasty in India. What was decided at the Council of Kashmir?
4. Analyse the political condition of Northern India on the eve of the Muhammadan invasion.

GROUP B

5. Justify or condemn Ibn Bhatuta's opinion that Alauddin Khiliji deserved to be considered 'one of the best Sultans.'
6. Write a connected account of the rise, progress, and downfall of the Bahmani kingdom.
7. 'Whatever be the view taken of the personal character of Shah Jahan or the efficiency of his administration, it can hardly be disputed that his reign marks the climax of the Mughal Dynasty and Empire.' Elucidate.
8. Form a critical estimate of the policy and character of Aurangzib, and indicate the main causes of the downfall of the Mughal Empire.

GROUP C

9. Trace the evolution of the administrative system in India under the East India Company.
10. 'Haider Ali was one of the ablest of the fierce adventurers who rose to power during the turmoil of the eighteenth century.' Illustrate this statement with a reference to his career and policy.
11. 'Lord Wellesley was a statesman, rather than an administrator, concerned chiefly with matter of high policy. Discuss.
12. Write short explanatory historical notes on any four of the following :—
 - (a) The Lichchavis.
 - (b) The Haysulas.
 - (c) The Embassy of Sir Thomas Roe.
 - (d) Pitt's India Act.
 - (e) The Treaty of Purandhar.
 - (f) The Suppression of the Thugs.
 - (g) The Battles of Chilianwala and Gujerat.

1926

HISTORY—PASS

First Paper—History of Europe

1. Estimate the importance of the Fall of Constantinople on the history of Europe.
2. 'Charles V is the greatest monarch of the sixteenth century.' Give a brief account of the achievements of Charles V.
3. 'The English Reformation is a *double* movement: the movement was first a revolt and then a reform.' Explain.
4. The establishment of the Dutch Republic meant much for cause of the reformers.....It had also great significance for the Political Revolution.' Discuss.
5. 'Though not the creation, Richelieu was the promoter of absolutism.' Expand.
6. Why do you regard the Peace of Westphalia as a prominent landmark in universal history?
7. What were the aims of Peter the Great? How far were these aims carried out by his successors?
8. Would you regard Charles XII as a Don Quixote on the throne?
9. 'The Emperor Joseph II is one of the most pathetic figures in history.' Why?
10. Account for the excesses of the French Revolution.
11. 'Prince Metternich is regarded as the incarnation of the spirit of Restoration.' Why?
12. Narrate the story of the unification of Italy.
13. Write short notes on any *four* of the following :—
(a) Wallenstein, (b) the edict of Nantes, (c) the financial reforms of Colbert, (d) the Peace of Ryswick, (e) Walpole, (f) the Berlin decrees, (g) the Parliament Act of 1832, (h) the Treaty of Berlin 1878.

HISTORY—PASS

Second Paper—History of England

1. 'Elizabeth took a middle course between the Protestant and the Catholics.' Is this a correct description of the religious settlement of Elizabeth?

2. 'Elizabeth and Mary summed up in their persons the opposite tendencies of the time.' Expand.

3. Draw a sketch-map of Europe indicating the extent of the dominions of Philip II.

4. The reign of Elizabeth is the epoch from which dates the naval and commercial greatness of England, and the Queen's care and attention contributed in no slight degree to the result.' Discuss.

5. 'The wisdom of Elizabeth was shown in nothing so strongly as her sagacity in the choice of ministers and her power of using men for her own purposes.' Illustrate.

6. Estimate the importance of the counter Reformation in England.

7. 'Mary's death was necessary for England's safety.' Do you agree?

8. 'The *Faerie Queen* is indeed a poem most characteristic of the time in which it was written.' Discuss.

9. 'In Shakespeare the glory of the Elizabethan drama was at its height.' Expand.

10. How would you characterize Elizabeth's attitude towards Ireland?

11. Discuss Elizabeth's policy towards the Protestants in
(a) the Netherlands, and (b) France.

12. Write short notes on any two of the following :—

(a) The Massacre of St. Bartholomew.

(b) Bothwell.

(c) John Knox.

(d) Alva's administration in the Netherlands.

HISTORY—PASS

Third Paper—History of India

1. Describe Asoka as a ruler and missionary.

2. The barbarian invasions of the fifth and sixth centuries A.D. constitute a turning-point in the history of northern and western India, both political and social.' Discuss.

3. Whom do you regard as the greatest Hindu monarch? Give reasons for your answer.

'The organization of the government undoubtedly was immensely

improved by Akbar, who was the real founder of the Mughal Empire'. Elucidate.

5. Narrate briefly the origin, rise, and fall of the Kingdom of Vijayanagar.

6. Give a brief account of the early Sikh gurus. State the origin and results of the First Sikh War.

7. To what main causes do you ascribe the failure of the French to establish an empire in India?

8. 'The most brilliant chapter in Lord Minto's (1807-1813) Indian Government is that of his foreign policy.' Amplify.

9. Estimate the importance of the part played by Maharaja of Scindia in the political history of India.

10. Write short historical or explanatory notes on any four of the following :—

- (a) Gondophares.
- (b) Kanishka's Council.
- (c) Vikramaditya (A.D. 1070-1126).
- (d) Nadir Shah.
- (e) Todar Mull.
- (f) The Battle of Sobraon.
- (g) The Treaty of Seringapatam.
- (h) The Treaty of Solbai.

1927

HISTORY—PASS

First Paper—History of Europe

Candidates are permitted to answer six questions only.

1. 'It was during the Renaissance that civilization lost its distinctive mediæval forms and acquired those characteristics which we call modern.' Explain.

2. 'Maximilian might have been spared the various misfortunes of his life if he had not taken the empire and its threadbare splendours splendidly.' Discuss.

3. Discuss the foreign policy of Wolsey.

4. Narrate briefly the leading features in the progress of the Reformation in France.

5. Why did (a) Gustavus Adolphus, and (b) Gardina Richelieu intervene in the 'Thirty Years' War'?

6. 'How far is it true to say that the period between 1648 and 1789 was constantly shaken by the wars of dynastic ambition'? Give leading examples.

7. 'Oliver-Cromwell reaped failure at home but he added triumph to triumph abroad.' Explain why.

8. 'What were the chief aims of Louis XIV? How far did he succeed in realizing them?'

9. 'To what causes would you attribute the rivalry between Austria and Prussia in the eighteenth century?'

10. 'The Seven Years' War all but completed the ruin of France'. Expand.

11. Give an illustrative account of the Reign of Terror in France during the French Revolution.

12. 'Why did the Holy Alliance fail?'

13. Draw a map of Europe in the year 1848.

14. 'Bismack's foreign policy can be summed up in two expressions: divide and rule.' Explain and illustrate.

15. Narrate the story of the unification of Italy.

HISTORY—PASS

Second Paper—History of England

Candidates are permitted to answer six questions only.

1. 'The aims of the Chartists were avowedly political'. What were these aims, and how far have they been realized during the Victorian period?'

2. Do you regard Peel's Corn Bill of 1816 as an instance of 'great betrayal'?

3. A veteran parliamentarian, a Whig by association, a Conservative in sentiment, popular with the masses, Palmerston had little sympathy with their aspirations and exactly represented a passing phase of public opinion.' Discuss.

4. 'Gladstone, the political legacy of Peel, was, at his best with some complicated problem of legislation or finance; while Disraeli, who looked back to Chatham and Bollingbroke was intent on maintaining the unique position of England among nations.' Illustrate.

5. 'The causes of the Irish discontent,' Disraeli said, 'were a

starving population, an absentee landlord class and an alien Church.' How far is this statement correct ?

6. 'The three great objects of the Conservative party', Disraeli said, 'were the maintenance of our institutions, the preservation of our empire, and the improvement of the condition of the people.' How far were the Conservatives successful in their achievements towards the solution of the Irish problems during the Victorian period ?

7. Explain the causes, both remote and immediate, of *either* the Crimean War *or* the Boer War.

8. 'Parnell brought home rule from the clouds and made it the living issue in the English party conflict.' Discuss.

9. How did the first Home Rule Bill of Gladstone differ from his second Home Rule Bill ?

10. 'England's policy towards Ireland during the Victorian period could be described as a policy of kicks and kisses. Do you agree ?

11. 'The Victorian Age', if it lives in history as a distinct epoch will do so because of its science rather than its politics'. Discuss.

12. Say what you know of Trade Unionism during the Victorian era.

HISTORY—PASS

Second Paper—History of England

THE ELIZABETHIAN PERIOD.

(a) *Candidates who were unsuccessful at the B. A. Examination of 1926 may answer these alternative questions.*

(b) *Candidates are required to give their answers in their own words as far as practicable.*

(c) *Candidates are permitted to answer six questions only. All questions are of equal value.*

1. How far is it true to say that Puritanism broke the despotism of the English monarchy ?

2. What do you know of the religious settlement of Queen Elizabeth ? How far was it political in character ?

3. 'I sent my ships against men', said Philip, 'not against the seas.' How far is this true ? What were the causes of the destruction of the Spanish Armada ?

4. 'That the execution of Mary, Queen of the Scots, was a wise and opportune stroke of policy can hardly be disputed.' Do you agree?

5. 'It was a boast of Elizabeth that when once her servants were chosen, she did not lightly displace them'. Is that so?

6. What was Elizabeth's policy towards Parliament? Do you approve of it?

7. Illustrate, with reference to Elizabeth's foreign policy, how far she was successful in keeping England out of war.

8. Give an account of progress of commerce and industries during the reign of Queen Elizabeth.

9. How far does Elizabethan literature reflect the glories of the period?

10. Write notes on any *four* of the following :—

- (a) The poor Law reform during the reign of Queen Elizabeth.
- (b) The 'Casket Letters.'
- (c) The 'Massacre of St. Bartholomew.'
- (d) Don John of Austria.
- (e) Walsingham.
- (f) The 'Sea dogs.'

HISTORY—PASS

Third Paper—History of India

GROUP A-

1. Analyse the nature of the civilization of Northern India at the close of the fourth century B. C.

2. 'Samudragupta, the Second Gupta monarch, was one of the most remarkable and accomplished kings recorded in Indian History'. Discuss.

3. 'For about two hundred years, from the middle of the sixth to the middle of the eighth century, the Pallavas were the dominant power in the Far South.' Amplify.

4. Give a short history of the Tughlaq Dynasty of Delhi.

5. Write a short account of the early European voyages to and settlements in India.

GROUP B

6. Estimate the importance of the part played by any *two* of the following in medieval Indian History :—

- (a) Bairam Khan.

- (b) Raja Todar Mal.
- (c) Bandah.
- (d) Murshid Quli Khan.

7. 'The story of the Hindu Empire of Vijayanagar which set itself up as a barrier to check the onrush of the armies of Islam is one of singular interest.' Elucidate.

8. State clearly the circumstances that led to the introduction of the Permanent Settlement and indicate the main defects of the system.

9. Narrate briefly the struggle between the English and the French for supremacy in India during the second half of the eighteenth century.

10. 'Lord Wellesley was one of the greatest of British rulers of India. Only Clive, Warren Hastings, and Dalhousie can challenge comparison with him, and in actual achievement he outdistanced them all.' Criticize the statement.

1928

HISTORY—PASS

First Paper—History of Europe

1. Give a brief account of the geographical discoveries of the fifteenth and the sixteenth centuries.

2. 'The Reformation in Germany was for some time left to itself and that proved its salvation.' Explain.

3. How far is it true to say that Calvinism is combative whereas Lutheranism is conservative in character?

4. Enumerate the causes of the struggle between Charles V and Francis I. Note briefly the chief incidents in this struggle.

5. To what causes would you attribute the success of the Dutch in their struggle for independence?

6. 'To this day Henry IV is dear to the French people and his popularity has never been eclipsed by that of his successor.' Why?

7. How far was Thirty Years' War a war of religion, and how far was it a war of politics?

8. 'The cavalier Parliament of England (1661-79) was more royal than the King.' Discuss.

9. 'The work of Richelieu cleared the way for the supremacy of France in Europe.' Expand.

10. How far was the war of the Spanish Succession universal in character? What was Louis XIV's responsibility for it?

11. Give an account of 'the warm water policy' pursued by Russia.

12. Analyse the causes of the French Revolution.

13. Give a critical estimate of the statesmanship of Napoleon I.

14. 'The July Revolution of 1830 in France awakened an echo in Europe.' Develop.

15. Write short notes on any four of the following :—

(a) The Humanists.

(b) The Religious Peace of Augsburg.

(c) The Treaty of Utrecht, 1713.

(d) The Diplomatic Revolution of 1756.

(e) The Berlin Decrees.

(f) The Holy Alliance.

16. Either, Mark on the accompanying map of Europe—

(a) the boundaries of the Principal States as they were in 1648 ;

Or, (b) the territorial gains of Napoleon I in 1807.

Or, Write a short essay discussing any one of the following subjects from the geographical point of view :—

(a) The progress of the Russianization of the Baltic Sea.

(b) The partitions of Poland.

(c) The expansion of Prussia into the German Empire.

HISTORY—PASS

Second Paper—History of England

1. Queen Victoria performed invaluable services for both the country and the Empire, and was the most potent and salutary influence in the great formative and transitional period indelibly associated with her name.' Do you agree? Give reasons for your answer.

2. 'Self-government in distant colonies,' said Disraeli, when it is conceded, ought to have been conceded as a part of, a great policy of imperial consolidation. It ought to have been accompanied by an imperial tariff, by securities for the people of England, for the unappropriated lands which belonged to the sovereign as their trustee.' How far was this ideal carried into actual practice by England in the Victorian period?

3. Give an account of the fiscal policy of Sir Robert Peel.

4. 'Gladstone must rank in history as superior to Disraeli alike in statesmanship and in eloquence.' Discuss.
5. 'The reign of Queen Victoria was emphatically a period of constitutional reform.' Expand.
6. 'Gladstone paid to Parnell after his death the high and the well-deserved tribute of describing him as a great statesman. Do you agree? What is your estimate of the services of Parnell?
7. 'Mr. Disraeli had raised what has been called the Russian spectre. No influence during our time has been so potent to direct the foreign and the domestic policy, to disturb the relations of parties, and to rouse the passions of the people, as that which is exercised by the dread and distrust of Russian ambition.' Elucidate
8. 'You have now had four years of it, you have despoiled churches. You have threatened every corporation and every endowment in the country. You have examined into everybody's affairs. You have criticized every profession and vexed every trade.' What is your opinion on the above indictment of Disraeli on the First Gladstone Administration?
9. How far is it true to say that the grievances of Ireland were more economical than political? How did (a) the Liberals, (b) the Conservatives, seek to solve the Irish question?
10. 'Disraeli was the embodiment of a vigorous and self assertive foreign policy which raised British prestige and gratified patriotic vanity.' Give a critical estimate of Disraeli's foreign policy.
11. Give a short account of the chief poets of the Victorian Age.
12. Give a critical account of the chief legislative measures which aimed at social reconstruction and amelioration of the condition of the people during your period.

HISTORY—PASS

Third Paper—History of India

GROUP A

1. Trace the development of the Yue-Chi Supremacy in India up to the reign of Kaniska the Great. What were the relations between China and India during this period?
2. Describe the intellectual, social, and religious condition of India during the Gupta period.
3. Discuss the origin of the different Rajput clans. Who were the Chalukyas?

4. Narrate briefly the history of the Chalukya Dynasty up to the time of the Rastrakuta Conquest.

GROUP B

5. Give a short account of the career of Firoz Tughlaq and indicate the principal causes that led to the downfall of the Pathan Empire.

6. Briefly describe the internal condition of India at the time of Jehangir as depicted by Sir Thomas Roe.

7. 'Aurangzeb's government was a system of continual distrust.' Criticize this statement, illustrating your answer from his treatment of the contemporary Indian States, Hindu and Muhammadan.

GROUP C

8. Sketch the development of the revenue administration in India under the East India Company. Why was the Permanent Settlement effected in Bengal?

9. Review the policy of Lord William Bentinck, giving in detail the various reforms, administrative and otherwise, made during his viceroyalty.

10. Examine critically the 'annexation policy' of Lord Dalhousie and give in detail the circumstances of two principal annexations.

1929

HISTORY—PASS

First Paper—Modern Europe

1. Why was it necessary for the Counter Reformation to suppress the reforming tendencies in Italy to which it owed its origin?

2. Sketch the career of Solyman the Magnificent and account for the decline of Turkish power.

3. 'But for the government of Henry IV there could have been no 'age of Louis XIV''. Criticize.

4. What were the terms of the treaty of Ryswick? Show how this treaty was a great blow to the pretensions of Louis XIV.

5. Describe the influence exercised by Calvin's doctrines in the realms of religion and politics. Is it correct to characterize Calvinism as the creed of rebels?

6. Elucidate the view that the eighteenth century was a duel between England and France for colonial supremacy.

7.. Describe the changes in the constitution of France between the years 1789 and 1804.

8. Discuss the objects of the Holy Alliance. How far is it correct to regard them as the outcome of an unpractical enthusiasm that was entirely out of date?

9. Trace the history of the unification of Italy. What were the contributions made by (a) Cavour, (b) Garibaldi, (c) Mazzini, and (d) Victor Emmanuel II to the success of the movement?

10. In no country was the result of the battle of Sadowna such an unwelcome surprise as in France.' Elucidate.

HISTORY—PASS

Second Paper—History of England

1. "During the first ten years of his reign, George III managed to reduce government to a shadow and to turn the loyalty of his subjects at home into disaffection.' Support this generalization by a record of relevant facts.

2. Give a full account of the influences, measures, and events that led up to the independence of the American Colonies.

3. 'Weary and disgraceful, indeed, as was the strife with the (American) Colonies, the years of its progress were years of as mighty a revolution for the mother-country as for its child.' Describe the working of this 'revolution' in the spheres of religion, morality, and material advance.

4. Give the history of parliamentary reform in the reign of George III.

5. Give an account of the career of the second Pitt, and an estimate of his statesmanship in matters domestic and foreign.

6. Describe and compare the parts played by Charles, James, Fox and Edmund Burke in the political and parliamentary life of England and in determining the English attitude towards the French Revolution.

7. Discuss the significance of the treaties of (a) Lunenburg, (b) Amiens, and (c) Tilsit, and their respective effects on English politics and foreign policy.

8. Give the history of the movement for the abolition of the slave trade, with reference to its principal exponents and leaders.

9. 'The internal history of England during the first two years

of Liverpool's premiership has been entirely dwarfed by the interest of external events.' Cite facts in support of this statement.

10. Discuss the following estimates of George III :—

(a) 'His resolve was to govern, not to govern against law, but simply to govern, to be freed from the dictation of parties and ministers, and to be in effect the first minister of the State' (GREEN).

(b) 'He was politically shortsighted, but within his range of vision, few saw facts so clearly ; he was obstinate and prejudiced but his obstinacy was redeemed by a moral intrepidity of the highest order, and his prejudices were shared by the mass of his people..... His subjects regarded him as an Englishman to the core (BRODRICK).

11. 'For the first time, the English theory of the limited monarchy is translated into fact. Constitutional Sovereignty openly or covertly rejected by Queen Victoria's predecessors, is at least frankly accepted, and the Cabinet System of government is able to operate without obstruction or impediment.' Amplify.

12. 'The reforms which have been accomplished by legislation in the nineteenth century have been consequent on the increasing power of the people and the augmented pressure of public opinion on the Legislature.' Elucidate.

13. Trace in broad outline the history of Ireland from the accession of Queen Victoria to the death of Parnell in 1891, and account for England's failure to conciliate the Irish people.

14. 'The death of Palmerston may be said to have closed the transition period through which England passed in her progress from aristocracy to democracy.....An age of transition is an age of compromise. And Palmerston himself was a living compromise.' Do you agree ? Give reasons for your answer.

15. State briefly the circumstances that led to the Crimean War. What were its immediate effects ?

16. 'Disraeli was the first minister since Canning, perhaps since Chatham, to think *imperially*.' Illustrate.

HISTORY—PASS

Third Paper—History of India

GROUP A.

1. Sketch Alexander's career of conquest in India.
2. Describe Social and Religious India of the time of Harshavardhana.

3. Write a history of Kanauj from the eighth to the twelfth century.

4. Give an account of the Tamil kingdoms of the south and of their maritime activities.

GROUP B.

5. Trace the rise and fall of the Hindu Empire of Vijayanagar. How is it described in the accounts left by the contemporary European travellers?

6. Compare briefly the administration of Sher Shah with that of Alau-ddin Khilji.

7. Describe Akbar as a man and a ruler.

8. Trace the origin and growth of the Maratha power.

GROUP C.

9. Write the history of Mysore during the second half of the eighteenth century.

10. What do you think of the policy and character of Lord Clive?

11. Review the Afghan policy of Lord Auckland.

12. Write notes on—

- (a) Doctrine of lapse.
- (b) Malcolm's Mission to Persia.
- (c) Permanent Settlement.
- (d) Fox's India Bill.

1930

HISTORY—PASS

First Paper—Modern Europe

Answer any six questions, only three to be taken from each group.

GROUP A.

1. What is meant by 'balance of power'? What efforts were made in the eighteenth century to maintain it, and with what results?

2. What were the circumstances which favoured the victory of the Lutheran movement in Germany?

3. 'If it can be said of Peter that he made Russia a European

power, it can be affirmed with equal truth that Catherine made Russia a Great power.' Elucidate.

4. Fix a short account of the history of Poland from the beginning of the eighteenth century to the final Partition.

5. Who were the Girondists? Indicate the part played by them in the French Revolution.

GROUP B.

6. Why did Napoleon adopt the continental system, and how did it operate? Trace the effect of this policy on his empire and on other States of Europe.

7. Contrast the Revolution of 1848 with that of 1799 in their extent, effect, and causes. Trace its course in the Austrian Empire.

8. Write a short sketch of the growth of Prussia, its territorial expansion, internal organization, social and economic development, and diplomatic alliances, down to 1878. Name the chief statesmen who have contributed to this growth.

9. Give a critical estimate of the character and statesmanship of Count Cavour (1810-61).

10. Draw a map illustrating the dismemberment of the Turkish Empire in the nineteenth century, adding notes on the circumstances that led to the loss of each province.

HISTORY—PASS

Second Paper—History of England

Only five questions are to be answered.

1- Briefly describe the events that led to the rupture of England *either* with her American Colonies, *or* with the French Republic in 1793.

2. As an organizer of victory, the elder Pitt has no superior in British history.' Amplify this statement with reference to the Seven Years' War.

3. Discuss the Constitutional importance of the General Election of 1784. Compare the Cabinet that followed with the Cabinet system that obtains now.

4. How was the Irish problem sought to be settled in the reign of George III?

5. What was England's relation with India in the latter half of the eighteenth century?

6. What led to the promulgation of the Berlin Decrees? How did England retaliate?

7. Give a short summary of Napoleon's designs on the East. How did the naval power of England frustrate them?

8. Give a character sketch of Edmund Burke. Can you explain the discrepancy in his attitudes towards America and France?

9. What were the social problems connected with the Industrial Revolutions? How did the Government attempt to solve them?

10. Bring out the importance of the line of Torres vedras in the strategy of the Peninsular war.

HISTORY—PASS

Third Paper—History of India

Six questions are to be attempted. From each section at least ONE question should be answered.

A.

1. Vincent Smith remarks that India offers unity in diversity, and that on account of this fact a continuous history of a vast region like India can be written. Explain this fundamental unity of India.

2. Describe the foreign missions of Asoka. What are our sources of information?

3. 'The extraordinary intellectual vitality of the Gupta period was largely due to the constant exchange of ideas with foreign lands in both East and West.' Discuss this statement.

4. Give an outline of Pallava history. What is the importance of Pallava art?

5. Write brief notes on the following places of archeological interest :—Taxila, Sanchi, Sarnath, Nalanda, and Mahenjo Daro.

B.

6. Give an account of the reigns of Husain Shah and Nasrat Shah in Bengal. How did Hindu literature flourish under their patronage?

7. Trace the changes in Akbar's religious beliefs. What are the principal contemporary authorities for his reign?

8. Sketch the career of the second Peshwa Baji Rao.

9. Write short notes on Guru Nanak and Guru Hargobind.

10. Sir A. Lyall states that towards the end of 1780 'the fortunes of the English in India had fallen to their lowest water-mark.' By what steps did Warren Hastings retrieve the situation?

11. Discuss the three epochs, mentioned by Sir W. Loe Warner in the British relations with the Indian Feudatory States.

12. The political unrest in India has been described as the most momentous event of our time in India history. Analyse its causes.

13. How have the Morley-Minto reforms been criticized in the Montague-Chelmsford Report ?

1931

HISTORY—PASS

First Paper—Modern Europe

six questions to be attempted.

1. Draw a map to show the European dominions of Charles V. Explain how they had fallen into his possession.

2. Discuss the political influence of the Reformation upon France.

3. What were the aims of Charles XII. of Sweden ? Account for his failure. Illustrate your answer with a map.

4. Explain the importance of the following treaties as making stages in the decline of the Turkish power, and illustrate with a map :—Carlowitz, Kutchak, Kainardji, London.

5. Trace the expansion of Prussia from the accession of the Great Elector to the death of Frederick William I. Illustrate your answer by a map.

6. Compare the motives by which the participators in the partitions of Poland were actuated, and show by means of a map the share of the spoil that accrued to each.

7. Explain the efforts made by Turgot to avert the French Revolution and account for his failure.

8. Sketch briefly the share of Austria in the wars of the period 1789—1815.

9. Explain Napoleon's policy of mediatization. How was it carried out, and how did it affect the failure of Germany ?

10. Draw a map to illustrate the political condition of Italy in 1815: and briefly trace the process of the unification of the country.

11. What was the *Ausgleich* (1866) ? Describe the composition of Joseph II's empire at this time, and illustrate your answer by a map.

12. Trace the history of the Balkan States from 1878 to the peace of Bucharest. Illustrate your answer by a map.

HISTORY—PASS**Second Paper—History of England**

1. Estimate the influence of the writings of Bolingbroke and Burke on the development of party principles and party organization in England during the reign of George III.

2. Discuss the extent of the personal influence of the crown over the government and its policy under King George III.

3. Summarize the steps taken by the British Parliament during the reign of George III to strengthen the control of the Crown over the conduct of Indian affairs.

4. Explain the constitutional importance of the career of John Wilkes.

5. 'No noble figure ever stood in the forefront of a nation's life'. Explore the truth in this estimate of the character and career of George Washington.

6. Compare the character and powers of the Cabinet in the days of Newcastle and the younger Pitt respectively.

7. Trace the course of events in Ireland which led to the Rebellion of 1798. What were the main problems of Irish administration in the days of the younger Pitt?

8. Estimate the importance of English sea-power in the wars of the time of George III.

9. Discuss the accuracy of the statement that Castlereagh inherited and fulfilled the political traditions of the younger Pitt.

10. Give an account of British colonial enterprise in the reign of George III, with special reference to the part played by James Cook.

HISTORY—PASS**Third Paper—History of India**

Only six questions are to be attempted

A

1. Describe the nature of the civilization of India in the Mauryan period.

2. 'The Gupta period is in the annals of classical India almost what the Periclean age is in the history of Greece.' Justify this remark.

3. Give an account of Harshavardhana and his times.

4. Describe the raids of Mahmud of Ghazni, and estimate their results.

B

5. What account of the Vijayanagar dynasty is preserved in the writings of contemporary European travellers ?

6. Give a brief account of the reign of Firoz Tughlaq and enumerate the principal causes of the downfall of the Pathan Empire.

7. Whom do you regard as the greatest Muhammadan Emperor ? Give reasons for your answer.

8. Describe Sivaji as a man, conqueror, and ruler.

C

9. Give an account of the European struggle for supremacy in India in the seventeenth and eighteenth centuries, and explain why the English or all the European nations were able to be successful.

10. Describe the foreign policy of Lord Minto (1807—1813).

11. Explain and comment on (a) balance of power, (b) non-intervention policy, and (c) subsidiary system.

12. Describe the causes and after-effects of the Mutiny of 1857.

1932

HISTORY—PASS

First Paper—Modern Europe

Answer only six questions, any three to be taken from each group.

GROUP A.

1. How far was the Reformation a result of the Renaissance ?

2. What were the chief aims of Philip II of Spain ? Do you consider him to be a great ruler ?

3. Account for the supremacy of France in European politics in the seventeenth century.

4. Draw a sketch map to illustrate the growth of Prussia, from the Great Elector to Frederick the Great, and give general reasons for this expansion.

5. Sketch the career of Joseph II of Austria. How far was he a benevolent despot ?

6. Mention the wars between England and France from 1638 to 1813, and explain the results of the hostility between the two countries in this period.

7. Write notes on any *two* of the following :—

- (a) The policy of Charles V.
- (b) Mazarin.
- (c) Solyman the Magnificent.
- (d) The Diplomatic Revolution of 1856.

GROUP B.

8. What are the main ideas of the French Revolution, and how far did they affect Europe in the nineteenth century ?

9. What were the reasons for the failure of the European coalitions to crush the French Revolution.

• 10. Draw a map of the empire of Napoleon I at its zenith, and account for its downfall.

11. What is meant by the 'Concert of Europe' ?

Trace its activities after the fall of Napoleon I.

12. Give a short account of the relations between Russia and Turkey from 1815 to 1878.

13. Narrate the story of Italian unity.

14. Write notes on any *two* of the following :—

- (a) Robespierre.
- (b) Canning's foreign policy.
- (c) The causes of the failure of the Holy Alliance.
- (d) The causes of the success of the Greeks in securing their independence.

HISTORY—PASS

Second Paper—History of England

Only five questions are to be answered.

1. 'George III was neither profligate nor great.' Comment upon this statement.

2. Write a short note on the House of Commons at the time of George III. What reforms, if any, were attempted or carried out during his reign ?

3. Discuss the policy of George III towards America.

4. 'From the hour of Chatham's death England entered on a conflict with enemies whose circle widened till she stood singlehanded against the world.' Discuss this statement.

5. Write a short life of William Pitt.

6. Write a short note on Trade and Industry at the time of George III.

7. Estimate the influence of Adam Smith's *Wealth of Nations* on English thought.
8. Discuss the social and economic conditions under George III.
9. Relate the story of the rupture between Burke and Fox.
10. Write a short note on the Tractarian Movement.
11. Discuss Fitzwilliam as Viceroy.
12. 'The period which elapsed between the resignation of Pitt and the battle of Waterloo was hardly less eventful in the history of British civilization than in the history of British empire.' Discuss this statement.

HISTORY—PASS

Third Paper—History of India

six questions to be attempted. From each section at least ONE question should be answered.

A

1. Describe the indigenous sources of the history of pre-Muhammadan India, explaining the absence of Hindu historical literature.
2. Institute a brief comparison between Asoka and Akbar.
3. Give a short account of Kanishka's conquests and extent of dominions. Why is his reign celebrated in the history of Buddhism?
4. Briefly narrate the history of the Chalukyas and the Pratiharas.

B

5. What do you know of Sher Shah and his government.
6. Narrate briefly the origin, rise, and fall of the Bahmani kingdom.
7. Describe the policy adopted by the Mughal Government towards the Hindu Princes in the time of Akbar and after.
8. Sketch the life and estimate the work of Ranjit Singh.

C

9. Account for the failure of the French to establish an empire in India.
10. Give a brief sketch of the revenue administration in India under the East India Company.
11. Write a critical note on the policy and character of Warren Hastings.

12. Compare the administration of Lord William Bentinck with that of Lord Dalhousie.

1933

HISTORY—PASS

First Paper—History of Europe

GROUP A

1. What were the leading factors of the civilization of the Renaissance ?
2. Explain the causes and the consequences of the Thirty Years' War.
3. Indicate the place of Richelieu in the history of his country.
4. Sketch the career of Solyman the Magnificent.
5. Write an account of the expansion of Russian power under Peter the Great.
6. Do you hold Charles XII responsible for the downfall of Sweden ?
7. Draw a sketch-map of Europe in the years 1713.

GROUP B

8. Can you justify the first and second partitions of Poland ?
9. What do you mean by the 'Diplomatic Revolution' ? How did it affect the political balance of Europe ?
10. Critically discuss the causes of the French Revolution.
11. Why did the Holy Alliance fail ?
12. Briefly narrate the history of the unification of Italy.
13. How did Greece achieve her independence ?
14. Indicate the services of Bismarck to Prussia and Germany.

HISTORY—PASS

Second Paper—History of England

1. *Either*, Draw a sketch-map of England and illustrate the Industrial Revolution.

Or, Draw a sketch-map of Europe in 1812 and illustrate Napoleon's triumph.

2. 'George III's resolve was to govern, not to govern against law but to be freed from the dictation of parties and ministers and to be in effect the first minister of the state.' How far did George III succeed and why ?

3. Give a brief account of the ministry of Lord North (1770-1778).
4. 'Fox is the founder of the party of Holland, Grey Melbourne, and Palmerston ; Pitt is the creator of the Toryism of Castlereagh, Canning, Wellington, and Peel'. Discuss.
5. 'What led to the revolt of the American colonies against England ? Why did England fail in suppressing the revolt ?
6. 'The Seven Years' War is a turning-point in British national history and it is a turning-point in the history of the world'. Explain.
7. Write a brief account of England's policy towards Ireland (1792-1801).
8. How far is it true to say that the back eddies of the French Revolution swept England into reaction ?
9. Discuss Pitt the Younger as (a) a finance minister, (b) a war minister.
10. Write notes on any one of the following :—(a) Pope ; *Dunciad*, (b) Adam Smith : *Wealth of Nations*, (c) Burke : *Reflections on the French Revolution*, (d) Paine : *Rights of Man*.

HISTORY—PASS

Third Paper—History of India

A

1. Analyse the nature of the civilization at the close of the fourth century B. C.
2. Describe Asoka as a ruler and missionary.
3. 'Samudra Gupta, the second Gupta monarch, was one of the most remarkable and accomplished kings recorded in Indian History. Discuss.
4. Describe the political condition of Northern India on the eve of the Muhammadan invasion.

B

5. Narrate briefly the origin, rise, and fall of the Kingdom of Vijayanagar.
6. Why is Alauddin Khilji considered 'one of the best Sultans' ?
7. Whom do you think to be the best of the Mughal kings—Akbar or Aurangzeb ? Give reasons.
8. Give a brief account of the early Sikh Gurus.
9. To what main causes do you ascribe the failure of the French to establish an empire in India ?

10. Trace the evolution of the administrative system in India under the East India Company from 1765 to 1873.

11. 'Lord Wellesley was a statesman rather than an administrator, concerned chiefly with matters of high policy.' Discuss.

12. What are, in your opinion, the causes and after-effects of the Mutiny of 1857 ?

1934

HISTORY—PASS

First Paper—History of Europe

Answer six questions only, three to be taken from each Group

GROUP A

1. Give a short account of the geographical discoveries in the fifteenth century. What were their effects on the commercial and political development of Western Europe ?

2. Examine the causes of the greatness and decay of Spain.

3. What led to the revolt of the Netherlands ? Explain its character and result.

4. Give an account of the reign of Henry IV of France. How did he succeed in pacifying the country ?

5. Describe the causes and results of the War of Austrian Succession. What were the motives of the different contending parties thereto ?

6. 'Peter the Great was the first to attempt to bridge over the yawning gulf between Russia and Western Europe and to make his empire into a modern civilized state'. Expand.

GROUP B

7. Enumerate the causes, political, social, and economic which led to the outbreak of the French Revolution.

8. Write a short history of the reign of Catherine II of Russia. How far did she carry out the policy of Peter the Great ?

9. Describe the Reign of Terror in France during the French Revolution. Indicate the part played in it by Robespierre.

10. How was Prussia regenerated after the humiliating disaster of Jena ?

11. Briefly narrate the history of the Peninsular War. How do

you account for the reverses suffered by the French in Spain ?

12. Narrate the story of the unification of Germany.

HISTORY—PASS

Second Paper—History of England

Attempt any six questions

1. 'It was a glorious peace for Great Britain ; it marks a signal epoch in her imperial history. But it was not so advantageous as she had a right to expect. Explain the above remarks with reference to the Treaty of Paris (1763).

2. Discuss the case of John Wilkes and explain fully its constitutional significance.

3. Trace in broad outline the course of events leading to the independence of the United States of America. How far was George III personally responsible for it ?

4. Estimate the importance of Pitt's administration during the nine years of peace which succeeded the election of 1784.

5. Trace the history of Whig Party in England during the reign of George III.

6. What were the effects of the French Revolution upon the internal history of England ?

7. Write a critical note on the Industrial Revolution.

8. Describe the part played by England in the Napoleonic War. Illustrate your answer by a sketch-map as far as possible.

9. Discuss the effects of the Napoleonic War upon the history of England during 1815-1820.

10. 'If the effort of George III failed to restore the power of the crown it broke the power which impeded the advance of the people itself to political supremacy'. Discuss.

HISTORY—PASS

Third Paper—History of India

Attempt six questions only of which at least one and not more than two must be from each group

GROUP A

1. 'How then in the face of such bewildering diversity can a history of India be written ?...The answer to the query

is found in the fact that India offers unity in diversity'. Explain.

2. Attempt a critical estimate of Asoka's place in history.

3. The Gupta period is in the annals of classical India almost what the Periclean age is in the history of Greece. Discuss.

4. What was the political condition of Northern India during the ninth and tenth centuries A. D. ?

GROUP B

5. Briefly describe the five sultanates into which the Bahamani kingdom was divided showing what policy they adopted towards the non-Muslim powers.

6. Describe Akbar as a man, conqueror, and ruler.

7. Sketch in broad outline the political history of the Mahrattas during the fifty years following the death of Aurangzeb.

GROUP C

8. Describe the changes introduced by Parliament into the Company's system of government in India and its relation with the home government from 1772 to 1858.

9. Why was the Permanent Settlement effected in Bengal ? What are its advantages and disadvantages ?

10. 'The Morley Minto constitution turned out to be after all only a half-way house. The Montague-Chelmsford Report of July 1918 condemned it as inadequate'. Discuss.

11. Write notes on any two of the following :—

(a) Tipu Sultan.

(b) Treaty of Bassein.

(c) The unveiling of Lhasa.

(d) The Durant line.

1935

HISTORY—PASS

First Paper—History of Europe

Answer six questions only, three to be taken from each group.

GROUP A

1. Explain the significance of the Renaissance on the history of modern Europe.

2. Describe the chief events in the reign of Philip II of Spain. What, in your opinion, were the causes of the decline of Spain?

3. Sketch the career of Richelieu. How did he promote the greatness of his country?

4. Write a note on the Catholic Reformation in Europe. What were its effective instruments?

5. 'In the seventeenth century and in the greater part of the eighteenth century, France, victorious in her struggle for dynastic aggrandizement on the continent of Europe, was destined to suffer defeat in her effort to secure colonies in Asia and America'. Expand.

6. Give an account of the growth of Brandenburg-Prussia under the Hohenzollerns before the accession of Frederick II.

GROUP B.

7. What were the ideals of the 'enlightened despots' of the eighteenth century? Describe the activities of any two of them.

8. How do you account for the phenomenal rise and equally remarkable downfall of Napoleon Bonaparte?

9. Draw a map of Europe and indicate thereon the main changes effected by the Congress of Vienna, 1815.

10. Briefly describe the story of Italian Unity.

11. Explain the nature of the Industrial Revolution. How did it affect the economic, social, and political condition of continental Europe?

12. Describe the causes, progress, and results of the Russo-Turkish war of 1877—8.

HISTORY—PASS

Second Paper—History of England

Attempt only six questions.

1. Write a critical estimate of the character and policy of George III. How far was he justified in calling himself 'a Whig of the Revolution'?

2. 'The idea of the cabinet as a homogeneous body, collectively responsible to Parliament, was not yet established.' To what extent is this remark applicable to the reign of George III?

3. How far did the House of Commons reflect the feelings of the nation in the latter half of the eighteenth century?

4. What were the causes leading to England's rupture with

France in 1793 ? What measures were adopted by Pitt (the younger) to check the spread of 'French principles' in his own country ?

5. Walpole is of all English statesmen the one whom Pitt (the younger) most nearly resemble in the character and direction of the work which he preferred to do.' Discuss.

6. Estimate the influence of sea power on the course of the Napoleonic Wars.

7. 'A corrupt aristocracy, a ferocious commonalty, a distracted government, a divided people.' Is this a correct representation of the state of Ireland in the closing years of the eighteenth century ?

8. Estimate the influence of the Evangelical Movement on the social and religious life in England in the latter half of the eighteenth century.

9. 'The reign of George III was a period of fruitful energy in all the creative arts.' Explain.

10. Give an account of the condition of the labouring classes in the reign of George III, and review the attempt to alleviate their misery.

11. Write short notes on any **four** of the following :—(a) the King's Friends, (b) the letter of Junius, (c) Admiral Rodney, (d) John Howard, (e) the Peace of Amiens, (f) the Continental System, (g) Edmund Burke, (h) *The Wealth of Nations*.

HISTORY—PASS

Third Paper—History of India

Attempt six questions only, taking two from each group.

GROUP A

1. Explain, and illustrate by concrete examples, the following statement about the Vedic Aryans :—

'It is plain that their religion and habits differed materially from those of Hindus in modern or even in early historical times..... Nevertheless, it is true that the roots of Hinduism go down into the Rigvedic Age.'

2. Sketch the Mauryan system of administration.

3. Explain the importance of the reigns of any **two** of the following :—(a) Skandagupta, (b) Yasodharman, and (c) Narasimhavarman.

4. What are the outstanding achievements of the Cholas ?

GROUP B

5. Sketch the life and character of **either** Alau-d-din Khaliji or Firoz Tughlaq.

6. Sketch the history of the Kingdom of Vijayanagar in the sixteenth century A. D. and describe briefly the striking feature of the capital city.

7. Describe the social and political relations between the Mughal emperors and the principal Rajput States.

8. Give a critical account of the character and achievements of Bajji Rao I and Haidar Ali.

GROUP C

9. Give a brief account of the Anglo-French struggle in South India from 1758 to 1761 A. D. To what causes do you attribute the final victory of the British ?

10. Discuss Hastings' dealings with Chait Singh and the Begums of Oudh with special reference to the comments of P. E. Roberts.

11. Form an estimate of the achievements of Lord Hastings.

12. Enumerate the administrative and social reforms introduced by Lord William Bentinck and Lord Ripon.

1936

HISTORY—PASS

First Paper—History of Europe

(Old Regulations for irregular Students only)

*Candidates are permitted to answer **six** questions only, taking **three** from each group.*

GROUP A.

1. Briefly describe the causes of the reformation.

2. Draw a sketch-map to illustrate the dominions of Charles V.

3. To what causes do you attribute the success of the revolt of the Netherlands ? How far is it true to say that the establishment of the Dutch Republic exerted great influence on the destinies of Europe ?

4. Why is the Peace of Westphalia regarded as a prominent landmark in universal history ?

5. 'Louis XIV's great aim was to secure for France the headship of Europe.' Did he succeed in realizing his ambition ? If not, why not ?

6. Describe the struggle between Peter the Great and Charles XII of Sweden. Why did the latter fail ?

7. 'The Seven Years' War was one of the decisive combats of history.' Why ?

GROUP B

8. How far is it true to say that the French Revolution accomplished the transition from the feudal system to the democratic system of the modern world ?

9. What is your estimate of the parts played by (a) Robespierre, (b) Danton, (c) the Committee of Public Safety, in the drama of the French Revolution ?

10. Describe briefly Napoleon's struggle with Austria.

11. 'The history of Europe from 1815 to the present day has been the attempt to undo the cardinal error of the congress of Vienna'. Explain.

12. How far was Bismarck successful against (a) Austria, (b) Socialism ?

13. Narrate the story of the unification of Italy.

14. Give an account of the reign of Alexander II of Russia.

HISTORY—PASS

Second Paper

(New regulations)

Candidates are required to give their answers in their own words as far as practicable

All the questions are of equal value.

Only six questions should be attempted.

1. Describe the political situation in Europe arising out of the wars of religion.

2. Describe the policy and measures of Colbert and Louvois, the ministers of Louis XIV.

3. Review the career of Charles XII of Sweden. What were the causes of his disastrous end ?

4. Trace the rise of Prussia as a kingdom.

5. What were the causes of the war of the Austrian succession ?

6. Describe the circumstances that led to the three partitions of Poland.

7. Describe the reign of Empress Catherine II of Russia.

Examine her claim to be considered as an apt pupil of Peter the Great.

8. Write a short history of Austria from 1789 to 1815.
9. Describe the part played by Russia in the Napoleonic wars.
10. Write notes on any **two** of the following—(a) League of Augsburg; (b) Turgot, (c) the Gironde, (d) The Berlin Decrees.

HISTORY—PASS

Third Paper

(New Regulations)

Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

Not more than six questions to be attempted.

1. 'In politics the period from 1815 to 1850 was one of aspiration rather than achievement.' Do you agree?
2. Form an estimate of the statesmanship of Metternich. Discuss in this connection the justice of the remark that the plenipotentiaries assembled at Vienna in 1816 ignored the challenge of the French Revolution.
3. 'The first fruit of the Crimean War was the union of Italy.' Critically examine this statement.
4. Review the character and career of Otto von Bismarck-Schönhausen.
5. Discuss the claim of Alexander II to be regarded as the 'Tsar Liberator.'
6. Illustrate from the history of your period the advantages and the dangers of a 'Concert of Europe.'
7. Discuss the main changes in the French frontier between 1859 and 1916.
8. To what extent can the working-class movement be regarded as a dominating feature of the period immediately preceding the war of 1914-18?
9. 'We are fighting to fulfil a solemn international obligation'. (Mr. Asquith, British Prime Minister).
'We are fighting for the fruit of our peaceful labour, for the inheritance bequeathed to us by a great past, and for our future' (Bethmann Hollweg, German Chancellor).

Examine these divergent views about the genesis and nature of the world war of 1914—18.

10. 'The Sino-Japanese war was the critical and decisive event in the modern history of the Far East.' Elucidate.

11. Explain what is meant by the 'Monroe Doctrine'. Has it been modified in recent years?

12. Write short critical or explanatory notes on any four of the following :—

- (a) 'A liberal Pope was a natural impossibility.'
- (b) 'I have called a new world into existence to redress the balance of the old.'
- (c) 'An Italian has no citizenship, no country, no national flag.'
- (d) 'The Russian Zollverein was a direct preparation for the empire of 1870.'
- (e) 'Navarino was an untoward event.'
- (f) 'The proletariates have nothing to lose but their chains.'
- (g) 'Never would Henry V replace the white flag of Henry IV with the tricolour.'
- (h) 'The United States will enter the war, 'to make the world safe for democracy.'
- (i) 'The whole western world is alike concerned in strengthening the Imperial Government and maintaining the integrity of China.'
- (j) 'Japan has begun to put forward what is some-times called "Asiatic Monroe doctrine".'

1937

HISTORY—PASS

First Paper—History of India

Candidates are required to give their answers in their own words as far as practicable.

*Only six questions are to be attempted, two from each group.
The questions are of equal value.*

GROUP A

1. Sketch briefly the history of the invasion of India by the Sakas and the Kusanas.

2. Attempt an estimate of the achievements either of Chandra-Gupta II Vikramaditya, or of Harshavardhana.

3. Give a short account of Rajaraja the Great and Rajendra-Choladeva I.

4. Write critical notes on any **three** of the following :—(a) Gautamiputra Satakarni, (b) the Pallavas of Kanchi, (c) Pulakesin II Chalukya (d) the Shahis of Kabul and the Punjab, (e) the *Chand Raisa*, (f) Jayachandra the Gaharwar king of Kanauj, (g) Alberuni, (h) Ballal Sen.

5. Comment critically on **one** of the following :—

(a) 'China excepted, no region of the world can boast of an ancient civilization, so continuous and unbroken as that of India... The ideas of the Vedic period are still a vital force, and even the ritual of the *Rishis* is not wholly disused.'

(b) 'The phrase Buddhist period, found in so many books, is false and misleading. Neither a Buddhist nor a Jain period ever existed, and neither of these religions ever superseded Brahmanical Hinduism.'

GROUP B

6. Discuss the general character of the administration of India under the Turko-Afghansultans. What were the causes of the downfall of the Sultanate of Delhi ?

7. 'Attempt a critical estimate of the reign of Sultan Alauddin Khilji.

8. 'Endowed with the highest qualities of the head and heart, and free from intolerance and bigotry, Akbar was one of the most remarkable figures in the history of the Middle Ages.' Discuss.

9. Give an account of the administrative reforms of Sivaji.

10. Write critical notes on any **three** of the following :—(a) the fall of Vijayanagar, (b) the administrative reforms of Sher Shah, (c) the Sikhs under Guru Govinda, (d) provincial government under Akbar, (e) the third battle of Panipat (1761), (f) the account of India by Manucci.

GROUP C

11. Draw a sketch-map of India showing the British conquests and annexation from the days of Lord Wellesly to those of Lord Dalhousie.

12. Give an account of the social and administrative reforms of Lord William Bentinck, and discuss his place in the history of Modern India,

13. Criticize the policy of the Afghan wars and the solution of the Afghan problem during the last quarter of the nineteenth century.

14. Write critical notes on any **three** of the following :—(a) defects of the permanent settlement, (b) the doctrine of lapse, (c) the suppression of the Pindaris, (d) the Company's Charter of 1833, (e) the legality of the annexation of Oudh, (f) the foreign policy of Lord Curzon.

15. Comment on **one** of the following :—

(a) In spite of some faults, there is a stamp of grandeur in all Clive's words and actions and these justify the verdict of Macaulay "that our island has scarcely ever produced a man more truly great either in arms or in council."

(b) 'In spite of his final failure, Dupleix is a striking and brilliant figure in Indian History. We cannot deny his real claims to greatness.'

HISTORY—PASS

Second Paper—European History

Candidates are required to give their answers in their own words as far as practicable.

Only six questions should be attempted.

The questions are of equal value.

1. The peace of the Pyrenees (1659) was a brilliant triumph for Mazarin.' Explain. Did the treaty affect the balance of power in Western Europe?

2. 'The state, I am the state.' Does this phrase accurately represent Louis XIV's idea of monarchy and the facts of his government?

3. Tell the story of the Turkish revival under the Kiuprili. Account for the Turkish rout before Vienna in 1683.

4. Review briefly the character and career of William III of Orange.

5. Examine the claims of Peter the Great to be regarded as the founder of modern Russia and as one of the greatest and most enlightened reformers of all time.

6. 'The Seven Years' War decided the European question whether Prussia should survive as a power in Central Europe, and

the Colonial question, whether Great Britain should acquire the empire of France.' Elucidate.

7. In European history the decades which immediately preceded 1789 have been characterized as the era of benevolent despotism. Is the locution justified?

8. How did the French Revolution reconstruct the government and society of France in the closing years of the eighteenth century?

9. To what extent was the ideal of a universal empire realized in Europe during the first decade of the nineteenth century?

10. Describe the part played by Great Britain in the Napoleonic Wars.

11. Write short notes on any two of the following :—

- (a) John de Witt, Grand Pensionary of Holland.
- (b) The Reunion Policy of Louis XIV.
- (c) Revocation of the Edict of Nantes.
- (d) The Battle of Blenheim.
- (e) Jacobinism.
- (f) The Confederation of the Rhine.
- (g) The adventure of the Hundred Days.
- (h) The extinction of the Holy Roman Empire.
- (i) The attempt of the House of Vasa to dominate the Baltic.
- (j) Importance of the Nile and Mississippi valleys in the history of Anglo French relations during your period.

HISTORY—PASS

Third Paper—

Candidates are required to give their answers in their own words as far as practicable.

Not more than six questions to be attempted.

The questions are of equal value.

1. 'The foundations of the European states system of the nineteenth century were laid at Vienna in 1815.' Discuss.

2. Review the policy of the Tsar Alexander I.

3. 'The July Revolution (1830) awakened the revolutionary tradition without satisfying the national aspirations.' Elucidate.

4. Form an estimate of the services rendered by Mazzini and Cavour to the cause of Italian unity.

5. To what extent did nationalism prove to be a disintegrating factor in the Habsburg dominions ?

6. What justification is there for regarding Kossuth as the Mazzini of Hungarian nationalism ?

7. Tell briefly the story of the emergence of the Christian states of the Balkans from Turkish domination.

8. 'The Franco-German War made Germany mistress of Europe and Bismarck master of Germany.' Explore the truth in this statement.

9. How far did the Japanese victory in the war of 1904—5 affect the balance of power in the Far East ?

10. Abraham Lincoln has been called 'the most generous of tyrants'. Is the locution justified ?

11. Write notes on any four of the following :—

(a) The Holy Alliance, 1815.

(b) Garibaldi.

(c) The Pontificate of Pius IX.

(d) The Dreikaiserbund, 1872.

(e) The Agadir incident, 1911.

(f) The battle of Jutland.

(g) Mensheviks and Bolsheviks.

(h) The 'Fourteen Points' of President Wilson.

(i) Sun Yat Sen.

(j) 'Government of the people, by the people, for the people, shall not perish from the earth.'

Calcutta University

B. A. PAPERS

1909

MATHEMATICS—PASS

First Paper

1. If a, b, c, d are the lengths of the four sides of a quadrilateral taken in order, and ϕ the angle between the diagonals, prove that the area is equal to

$$\frac{1}{4} (a^2 - b^2 + c^2 - d^2) \tan \phi.$$

How do you interpret the result when $\phi = 90^\circ$?

2. Find a general expression for all angles that have the same cosine as a . Hence deduce a general expression for all angles of which the cosine is equal to the sine of twice the angle.

3. Assuming the truth of De Moivre's theorem for positive integral values prove it for fractional values of the index.

Apply the theorem to find the cube root of

$$\sqrt{\frac{1}{2}} + \sqrt{-\frac{1}{2}}$$

4. (1) Sum to n terms each of the series :

$$\begin{aligned} \sin \theta &= \sin 3\theta = \sin 4\theta + \dots\dots\dots \\ \sin \theta + 2 \sin 2\theta + 3 \sin 3\theta + \dots\dots\dots \end{aligned}$$

Or,

(2) Find the exponential values of $\sin x$ and $\cos x$, and use these values to prove the identity

$$\begin{aligned} \sin (x+y+z) + \sin (x+y-z) + \sin (x-y+z) + \sin (x-y-z) \\ = 4 \sin x \sin y \sin z. \end{aligned}$$

5. (1) Show that in general three normals can be drawn to a parabola from a given point.

If $\theta_1, \theta_2, \theta_3$ are the inclinations to the axis of x of three normals to a parabola $y^2 = 4ax$ from the point (h, k) , show that

$$\frac{1}{\tan \theta_1} + \frac{1}{\tan \theta_2} + \frac{1}{\tan \theta_3} = \frac{h-2a}{k}$$

Or,

(2) Find the equation of the locus of the pole of a normal chord of the parabola $y^2 = 4ax$

6. Find the ratio in which the line joining the points (x_1, y_1) , (x_2, y_2) is cut by the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, and deduce the equation (i) of the tangent at a given point on the curve and (ii) of a pair of tangents through a given point.

Prove that the greatest angle at which a concentric circle can cut the ellipse is $\tan^{-1} \frac{a^2 - b^2}{2ab}$.

7. If θ and θ' are the inclination to the major axis of conjugate diameters of an ellipse whose axes are $2a$, $2b$, show that

$$\tan \theta \tan \theta' = -\frac{a^2}{b^2}$$

Shew also that, if the diameters are equally inclined to the axes, they are equal to one another and to $\frac{\sqrt{a^2 + b^2}}{2}$.

8. (i) Representing the co-ordinates of any point on a hyperbola $xy = c^2$ by ct and $\frac{c}{t}$, where t is a variable parameter, show that the equation of the chord joining the two given points t_1, t_2 is

$$x + yt_1t_2 = c(t_1 + t_2).$$

A and B are two fixed points on a hyperbola and P is a variable point. AP and BP meet an asymptote in the points R and S . Show that RS is constant in length.

Or,

(ii) Define an asymptote. Find from your definition the equation of the asymptotes of the hyperbola

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$$

Show that the polar of any point on an asymptote of a hyperbola is parallel to that asymptote.

9. Defining a conic by means of its focus and directrix, show that the equation of the curve, when its vertex A is the origin, may be written in the form

$$y^2 = 2lx - (1 - e^2)x^2$$

Prove that if any chord PQ drawn through a fixed point Q of the curve meets the line $e^2x + 2l = 0$ in V , the angle PAV is constant.

MATHEMATICS—PASS

Second Paper

Where alternative questions are given only **one** must be attempted.

1. Define a differential co-efficient and find from the definition the differential co-efficient of $\log x$ and $\cos nx$.

2. (a) State and prove Leibnitz's theorem for the n^{th} differential coefficient of the product of two functions.

$$\text{If } x = \frac{y}{e^x} \text{ find } \frac{d^n y}{dx^n}.$$

Or,

(b) If $u = f(x, y)$ where $y = \phi(x)$ show that

$$\frac{du}{dx} = \left(\frac{du}{dx} \right) + \left(\frac{du}{dy} \right) \frac{dy}{dx}$$

If $u = \frac{1}{r}$, where $r^2 = (x-a)^2 + (y-b)^2 + (z-c)^2$

$$\text{show that } \frac{d^2 u}{dx^2} + \frac{d^2 u}{dy^2} + \frac{d^2 u}{dz^2} = 0$$

3. Show that

$$f(x+h) = f(x) + hf'(x) + \frac{h^2}{1 \cdot 2} f''(x) + \dots + \frac{h^n}{n!} f^{(n)}(x) + \frac{h^{n+1}}{(n+1)!} f^{(n+1)}(x + \theta h)$$

Illustrate geometrically the equation

$$f(x+h) = f(x) + hf'(x + \theta h)$$

4. Show how to find the maximum or minimum values of a given function of a single variable.

Find the altitude of the cone of maximum volume that can be inscribed in a given sphere.

5. (a) Show that the tangent at (ξ, η) to the curve $f(x, y) = 0$ is given by

$$(x - \xi) \frac{df}{d\xi} + (y - \eta) \frac{df}{d\eta} = 0$$

If the line $lx + my - 1$ touches the curve

$$(ax)^n + (by)^n = 1$$

Show that

$$\left(\frac{2}{a} \right)^{n-1} + \left(\frac{m}{b} \right)^{n-1}$$

Or,

(b) If x is the distance passed over in time t by a point moving in a straight line, show that $\frac{dx}{dt}$ represents the velocity of the point, and $\frac{d^2x}{dt^2}$ the acceleration of the velocity.

A point moves with simple harmonic motion along a straight line, show that the acceleration varies as the distance from a fixed point.

6. Explain the relation between integration and summation.

Integrate $\cos^3 x$, $\tan^3 x$, $\sqrt{\frac{a^2 + x^2}{x}}$

7. Find formulae of reduction for

$$\int x^n e^x dx \text{ and } \int \sin^n x \cos^n x dx$$

Evaluate $\int_0^4 x^4 \sqrt{20x - x^2} dx$.

8. Evaluate any two of the following integrals:—

$$\int \frac{dx}{(a^2 \cos^2 x + b^2 \sin^2 x)^2}, \quad \int \frac{x^2 + x + 2}{(x^2 - x + 1)(x - 1)^2} dx,$$

$$\int_0^\pi 2 \sin^m x \cos^n x dx, \quad \int_a^b \frac{dx}{\sqrt{(x-a)(b-x)}}$$

9. (a) Trace the curve

$$y^2 x = a^2(a - x),$$

and find the area included between the curve and the axis.

Or,

(b) Solve the following equations:—

$$(1) \quad (x+a) \frac{dy}{dx} = y(1-ax);$$

$$(2) \quad 2 \frac{dy}{dx} = \frac{x}{y} + \frac{y}{x};$$

$$(3) \quad \frac{d^2 y}{dx^2} - x^2 y = ae^{nx} + be^{-nx}.$$

MATHEMATICS—PASS**Third Paper**

Candidates are permitted to attempt not more than eight of the following questions :

1. Prove that in a homogeneous fluid at rest under the action of gravity, the difference of pressure at two points varies as the difference of their depths.

Three fluids, whose densities are in arithmetical progression fill a semi-circular tube whose bounding diameter is horizontal; prove that the depth of one of the common surfaces is double that of the other.

2. Calculate the thrust on any plane area exposed to a homogeneous liquid under gravity.

A triangle is immersed in a homogeneous liquid with one side in the surface; draw a horizontal line so as to divide the triangle into two portions, the thrusts on which are equal.

3. Find the centre of pressure of a triangle whose base is in the surface of a homogeneous liquid not exposed to pressure.

Find the depth of the centre of pressure of a trapezium with one of the parallel sides in the surface.

4. Find the conditions of equilibrium satisfied by a solid floating freely in a fluid.

Prove that a homogeneous solid in the form of a right circular cone can float in a liquid of twice its own density with its axis horizontal.

5. A vessel of water is placed in one scale of a balance and there is a weight in the other which will just counterbalance it. Will the equilibrium be disturbed if a person dips his finger in the water, without touching the sides of the vessel? Explain fully the principle upon which your answer depends.

6. A diving bell is suspended at a fixed depth, a man who has been seated in the bell suddenly falls into the water and floats. Determine the effect on the tension of the chain.

7. If the atmosphere be at rest and its temperature constant, prove that as the altitude increases in A. P., the density diminishes in G. P.

Hence, calculate the difference in the altitude of two stations by means of barometric readings.

8. Define Longitude, Latitude, Right Ascension, and Declination of a heavenly body.

If the Longitude of a star be equal to its Declination, prove that its Latitude is equal to its Right Ascension.

9. Explain how the diurnal rotation of the earth may be manifested by the rotation of the place of oscillation of a pendulum, and prove, from general reasonings, that the rate of rotation will be approximately proportional to the sine of the latitude of the place of suspension.

10. Explain what is meant by the Equation of Time and investigate its fluctuations throughout the year.

11. If, on the day of one of the Equinoxes, the moon be half full, prove that to a spectator at the equator, she will rise with the line bounding her visible disc horizontal.

12. Prove that the greatest possible number of eclipses in a year is seven, and find how many of these are lunar and how many solar. What was the Chaldean Saros?

13. Determine the effect of annual parallax on a star. Where must a star be situated so as to have no displacement due to parallax?

14. Enunciate the three laws of Kepler.

The two satellites of Mars have periodic times 30 hours and $7\frac{1}{2}$ hours respectively. Find the ratio of their mean distances from Mars.

1910

MATHEMATICS—PASS

First Paper

Not more than eight questions to be attempted.

1. Given $\sin A$, find $\sin \frac{A}{2}$ and $\cos \frac{A}{2}$. Explain why there is an ambiguity in your formulae; show however that there are only two possible values for $\tan \frac{A}{2}$ when $\sin A$ is given.

Given $\sin (-510^\circ) = \frac{1}{2}$, obtain $\sin (-255^\circ)$, $\cos (-255^\circ)$, $\tan (-255^\circ)$.

2. Find the general expression for all angles which have the same cosine as a , illustrating your remarks by means of the cosine graph.

Solve the equations :—(i) $\cos 3\theta = \sin 2\theta$

(ii) $2(\sin^4\theta + \cos^4\theta) = 1$

3. With the usual notation for the sides and angles of a triangle, prove the following relations :

$$(1) \quad r = \frac{S}{s} = \frac{1}{4} R \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2};$$

$$(2) \quad R = \frac{abc}{4\Delta} = \frac{1}{4}(r_1 + r_2 + r_3 - r).$$

Find the distance between the centres of the inscribed and circumscribed circles in terms of their radii, and show that in any triangle $\sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}$ can never exceed $\frac{1}{8}$.

4. Prove $(\cos \theta + i \sin \theta)^n = \cos n\theta + i \sin n\theta$ where n is any rational quantity, positive or negative ; and use this result to solve the equation $x^3 = \frac{1+x}{\sqrt{2}}$

Simplify and put in the form $A + iB$ the expressions

$$(i) \quad \left(\frac{1 + \cos \phi + i \sin \phi}{1 + \cos \phi - i \sin \phi} \right)^n$$

$$(ii) \quad \tan(x + iy).$$

5. Find the expansion of the sine of an angle in terms of its circular measure.

Determine the constants A and B so that the equation

$$\sin \frac{\theta}{2} = A \sin \theta + B \sin \frac{\theta}{2}$$

may be satisfied up to the third power of θ , and hence give an approximate method of trisecting an angle.

6. Sum the following series.

$$(i) \quad \sin a + \sin(a + \beta) + \sin(a + 2\beta) + \dots \text{to } n \text{ terms.}$$

$$(ii) \quad 1 + x \sin a + \frac{x^2}{2!} \sin 2a + \frac{x^3}{3!} \sin 3a + \dots \text{to inf.}$$

$$(iii) \quad n \sin a + \frac{n(n-1)}{2!} \sin 2a + \frac{n(n-1)(n-2)}{3!} \sin 3a + \dots \text{to } n \text{ terms.}$$

7. When the axes of co-ordinates are changed but the origin is unchanged, the expression $ax^2 + 2hxy + by^2$ changes into $a'x'^2 + 2h'x'y' + b'y'^2$; Show that

$$\frac{a + b + 2h \cos w}{\sin^2 w} = \frac{a' + b' - 2h' \cos w'}{\sin^2 w'}$$

$$\text{and } \frac{ab - h^2}{\sin^2 w} = \frac{a'b' - h'^2}{\sin^2 w'},$$

when w and w' are the angles between the axes.

The equation $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ of a hyperbola referred to its principal axes is known to transform into $4xy = c^2$ when referred to its asymptotes; what properties of the hyperbola can be immediately deduced by means of the above proposition from this fact?

8. Find the condition that $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ should represent two straight lines. Find the equations of the diagonals of the parallelogram whose sides are

$$x^2 + 4xy + y^2 = 0 \text{ and } x^2 + 4xy + y^2 - 14x - 16y + 37 = 0.$$

9. Obtain the equation of the tangent at any point of the circle $x^2 + y^2 + 2gx + 2fy + c = 0$.

Find the equation of the circle touching the co-ordinate axes and the line $x + y = 7$.

10. Show that the locus of the middle points of the parallel chords of a parabola is a straight line parallel to the axis.

PV is the diameter through the fixed point P of a parabola, QV any ordinate to it. QV is bisected in M and PV in N. Show that the locus of the intersection of PM and QN is a parabola touching the given parabola.

11. Find the equations of the tangent and normal at the point $P(a \cos \theta, b \sin \theta)$ of the ellipse.

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

If the normal at P meets the major axis in G, find the length PG.

If the normals PG and P'G' are perpendicular, prove that $PG^{-2} + P'G'^{-2} = (a^2 + b^2)b^{-4}$.

12. Explain how the curves :—

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1; \quad \frac{x^2}{a^2} - \frac{y^2}{b^2} = 0; \quad \frac{x^2}{a^2} - \frac{y^2}{b^2} = -1$$

are related to each other.

Show that the polar of any point on the conjugate hyperbola with respect to the original hyperbola touches the conjugate hyperbola.

MATHEMATICS—PASS

Second Paper

Ten questions are to be attempted.

1. Obtain, from first principles, the differential coefficient of $\tan x$,

Also calculate $\frac{dy}{dx}$, when $y = \tan^{-1}(\sec x + \tan x)$.

2. Prove Maclaurin's theorem, and apply it to establish the expansion

$$e^x \cos x = 1 + x - \frac{x^3}{3} - \frac{x^4}{6} + \&c.$$

3. Divide 10 into two parts, that the product of the square of one and the cube of the other may be the greatest possible.

4. Write down the equations of the tangents and normals to the curve $y(x^2 + a^2) = ax^2$ at the points where $y = \frac{a}{4}$

5. For the cardioide $r = a(1 - \cos \theta)$ prove that

$$(i) \rho = 2a \sin^3 \frac{\theta}{2}$$

$$(ii) 2ap^2 = r^3$$

$$(iii) \text{Polar Subtangent} = 2a \frac{\sin^2 \frac{\theta}{2}}{\cos \frac{\theta}{2}}$$

6. Prove that the chord of curvature through the pole for the curve $p = 1(r)$ is given by.

$$\text{chord} = 2p = \frac{dr}{dp} = 2 \frac{f(r)}{f'(r)}$$

$$7. \text{Integrate } \int \frac{du}{\sqrt{u^2 + a^2}}; \int \frac{du}{u^2 + 6u + 13}$$

$$8. \text{Integrate } \int \frac{(x^2 + 6x - 8)}{x^3 - 4x} dx, \int x(e^{ax} + e^{-ax}) dx.$$

9. Trace the curve $r = a \sin 2\theta$; and find the area of one loop.

10. Calculate the length of the arc of the parabola $x^2 = 4ay$ from the vertex to one extremity of the latus rectum.

11. Integrate $\frac{dy}{dx} + \frac{y}{x} = y^2$

12. Integrate $(x^2 + 3xy) = y^2 \frac{dy}{dx} 3y^2$.

MATHEMATICS—PASS

Third Paper

Answer not more than four questions from each group.

A.

1. Obtain, from first principles, the condition of equilibrium of two liquids that do not mix in a bent tube.

A bent tube contains water, mercury, and a liquid of unknown density which is less than that of mercury. The height occupied by these liquids (that of mercury being measured from the lowest surface of separation) are 15 cm., 1 cm., and 2 cm. respectively. Find the density of the (third) liquid that of mercury being 13.6.

Define whole pressure. Show that whole pressure on a plane surface is the same as the resultant thrust. A rectangle (a, b) is immersed in a liquid of density ρ , with one of its edge, horizontal and its plane inclined at an angle θ to the horizons. Find the resultant thrust on its surface, if the depth of the horizontal edge is h below the surface of the liquid.

3. Define centre of pressure.

Prove that the centre of pressure is below the centre of gravity.

A square is immersed in a liquid, in a vertical plane with two of its sides horizontal and the upper one at a depth equal to a side of the square. If in this position the distance between the centre of gravity and the centre of pressure is 5 inches, find the length of a side of the square neglecting the effect of the atmospheric pressure.

4. Find the conditions of equilibrium of a body immersed in a liquid and partly supported by a string.

A string passing over a smooth fixed pulley has attached to its two ends two masses m and m' , which are completely immersed in liquids of densities ρ and ρ' respectively. Determine the condition of equilibrium.

5. Define the specific gravity of a solid, and explain a method of determining it experimentally.

A cylinder floats in a liquid of twice its density. A body is placed on the top of the cylinder, and makes it sink through the whole length of its axis; when the body is suspended from the bottom of

the cylinder by means of a string, only $\frac{1}{2}$ of the axis of the cylinder is immersed. Compare the specific gravities of the cylinder, the liquid, and the body.

6. State Boyle's law, and explain how it is experimentally verified.

A cylindrical test tube is held in a vertical position and immersed mouth downwards in water. When the middle of the tube is at a depth of 31.5 it is found that the water has risen half-way up the tube. Find the atmospheric pressure (at the time of observation) in pounds weight per square inch. (A cubic foot of water weighs 100 ounces.)

7. Explain the principles on which the use of Bramah's press depends, and show how to find the relation between the force applied to the smaller piston and the force exerted by the press, the areas of the pistons being given.

B

8. Define azimuth, altitude, right ascension, and declination, and show by means of a diagram how they are related to each other. A known star is observed to culminate and its altitude is noted. Determine the latitude of the place.

9. Explain how the following conclusion has been arrived at :—

The earth rotates about an axis which is very nearly fixed in space, the period of rotation being constant. Indicate how this axis moves in space.

10. Define the parallax of a heavenly body, and explain why a star has no parallax. What is secular parallax? The parallax of the sun is 884" and its semi diameter is 16'. Find the radius and the distance of the sun.

11. Define "sidereal day" and "mean solar day," and find the relation between them.

Explain how an astronomical clock is set, and the inconvenience of its use for other than astronomical purposes.

12. Define, elongation, opposition, conjunction, phase. How are they related to one another?

Discuss carefully the peculiarities in the phases of the Moon, Venus, and Jupiter.

13. Distinguish between an occultation, an eclipse, and a transit.

Explain why an eclipse does not occur at every opposition or

conjunction. Compare the eclipses of the Sun and the Moon in respect of their main features.

* 14. What conditions must a civil year satisfy ?

Show by calculations the nature of the reform effected by the Julian and the Gregorian calendars, it being understood that the tropical year contains 365·242 days.

1911

MATHEMATICS—PASS

First Paper

1. Find the sines and angles of the pedal triangle in terms of the sides and angles of the original triangle.

Prove that the radius of the circle inscribed in the pedal triangle, is $2R \cos A \cos B \cos C$; where R is the radius of the circumcircle, and A, B, C , the angles of the original triangle.

2. Obtain the general solutions of $\sin 2\theta = \cos 3\theta$. Shew that—

$$\sin 3^\circ = \frac{1}{16} \{ (\sqrt{6} + \sqrt{2}) (\sqrt{5} - 1) - 2(\sqrt{3} - 1) \sqrt{5} + \sqrt{5} \}$$

3. Prove De Moivre's theorem for a positive integer.

Express $\cos^n \theta$ in a series of cosine of multiples of θ , when n , is a positive integer.

Or,

$$\text{Simplify :—} \left[\frac{1 + \cos \phi + i \sin \phi}{1 + \cos \phi - i \sin \phi} \right]^n$$

$$\text{and prove that } 4 \tan^{-1} \frac{1}{3} - \tan^{-1} \frac{1}{239} = \frac{\pi}{4}$$

4. Prove that the equation $Ax + By + C = 0$ represents a straight line. Interpret when A and C both vanish.

Find the co-ordinates of the foot of the perpendicular from (a, b) on the above line. The axes of co-ordinates being rectangular.

Or,

Show that $A(x^2 - y^2) + 2Hxy = 0$ represents a pair of straight lines through the origin at right angles to each other, the axes of co-ordinates being rectangular.

Prove that the lines joining the origin to the intersections of $7x^2 + 8xy - 7y^2 + 6(x - 2y) = 0$ and $2x + y - 1 = 0$, are at right angles.

5. Show that $x^2 + y^2 + 2gx + 2fy + c = 0$ represents a circle, the axes of co-ordinates being rectangular.

If (x_1, y_1) be the co-ordinates of any point, what does $x_1^2 + y_1^2 + 2gx_1 + 2fy_1 + c$ represent geometrically.

Prove that the locus of a point which moves so that the ratio of the tangents from it to two given circles is constant is a co-axial circle.

6. Obtain the equation of the normal at the point $(at^2, 2at)$ of a parabola, the axes of co-ordinates being rectangular.

Show that the equation of the evolute to the parabola is $27ay^2 = 4(x - 2a)^3$

Or,

Obtain the polar equation of a parabola referred to the focus as pole and the axis as the initial line.

Obtain the Cartesian equation of the inverse of a parabola with respect to the focus as the centre of inversion.

7. Find the equations of the tangent and normal at any point (x_1, y_1) of the ellipse.

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} - 1 = 0$$

Prove that the locus of the poles of normal chords of the ellipse is $\frac{a^6}{a^2} + \frac{b^6}{y^2} - (a^2 - b^2)^2$

8. Obtain the equation of the hyperbola referred to the normal and tangent at a vertex as axes of co-ordinates.

Prove that, if a chord of a rectangular hyperbola subtend a right angle at a vertex, it is parallel to the transverse axis.

Or,

Prove that all conics passing through the intersections of two rectangular hyperbolas are rectangular hyperbolas.

Deduce that a rectangular hyperbola circumscribing a triangle passes through its ortho-centre.

MATHEMATICS—PASS

Second Paper

Ten questions to be selected.

1. Obtain, from first principles, the differential coefficient of $\log x$.

Calculate $\frac{dy}{dx}$ when $\cos y = \frac{3+5 \cos x}{5+3 \cos x}$

2. Prove Taylor's Theorem.

Find the first three terms in the expansion of $\sec x$.

3. Find at what point the subtangent to the curve $xy^2 = a^2(a-x)$ is a maximum.

4. Prove that

$$\frac{x}{a} + \frac{y}{b} = 1.$$

touches the curve

$$\frac{x}{a} + \log \frac{y}{b} = 3$$

at the point where the curve crosses the axis of y .

5. Prove that in the equilateral hyperbola $r^2 \cos 2\theta = a^2$ we have $pr = a^2$, and that the pedal is a lemniscate.

6. For any plane curve, prove that

$$p = \frac{r}{\sin \phi \left(1 + \frac{d\phi}{d\theta}\right)}$$

where $\tan \phi = \frac{r d\theta}{dr}$

Deduce the formula for p in terms of r and θ

7. Prove, from the first principles, that

$$\int_a^b \sin x \, dx = \cos a - \cos b$$

8. Integrate $\int \sqrt{a^2 + x^2} \, dx \int \operatorname{cosec} x \, dx$

$$\frac{\pi}{2}$$

9. Integrate $\int \frac{dx}{x^4 + 8x^2 - 9} \int_0^{\frac{\pi}{2}} \frac{\cos x \, dx}{(1 + \sin x)(2 + \sin x)}$.

10. Trace the curve $3ay^2 = x(x-a)^2$ and calculate the whole length of the loop.

11. Find the area of the pedal of an ellipse with regard to any point at distance c from the centre.

12. Integrate $\frac{dy}{dx} + x \sin 2y = x^3 \cos^2 y$.

13. Integrate $(2ax + x^2) \frac{dy}{dx} = a^2 + 2ax$

14. Integrate $\frac{d^2y}{dx^2} + 2\frac{dy}{dx} - 2y = 0$.

15. Integrate $x^2 e^x - y^2 + 2xy \frac{dy}{dx} = 0$.

MATHEMATICS—PASS

Third Paper

Not more than four questions from each group to be attempted.

A

1. Distinguish between pressure at a point and pressure on a surface. Define whole pressure, and show how to calculate it.

In the vertical side of a water tank there is a rectangular plate whose upper edge is horizontal and eight feet below the surface of the water; the depth of the plate is one foot and breadth two feet: find the resultant pressure on the plate taking the weight of a cubic foot of water as being 62·5 lbs.

2. Find the centre of pressure of an isosceles triangle immersed with its plane vertical and its base horizontal and half as far below the surface as its vertex.

3. State and prove the conditions under which a body will float partly immersed in a liquid.

A uniform cylinder floats in mercury with 5·1432 inches of its axis immersed. Water is poured on the mercury to the depth of one inch and it is found that 5·0697 inches of the axis are below the surface of the mercury. Find the weight of a cubic inch of mercury.

4. Explain a method of determining the specific gravity of a liquid.

To a piece of wood which weighs 4 oz. in vacuo a piece of metal is attached whose weight in water is 3 oz. and the two together are found to weigh 2 oz. in water. Find the specific gravity of the wood.

5. Show how to determine whether a floating body is in stable or unstable equilibrium.

A solid body consists of a right cone joined to a hemisphere on the same base, and floats with the spherical portion partly immersed; prove that the greatest height of the cone consistent with stability is $\sqrt{3}$ times the radius of the base.

6. Explain fully how to measure heights by means of the barometer.

7. The length of the lower pipe of a common pump above the surface of the water is 20 feet, the cross-section of the barrel of the pump is 36 times that of the pipe, and the length of the stroke is one foot; find how far the water will rise at the end of the first stroke taking the height of the water barometer to be 32 feet.

B

8. Define the terms—prime vertical, azimuth, hour angle, right ascension, celestial longitude.

When the first point of Aries is rising on the eastern horizon, what angle does the ecliptic make with the horizon at that point for an observer in latitude $22^{\circ}34'30''$ N?

9. Prove that the altitude of the celestial pole at any place is equal to the latitude of the observer. The observatory at Stockholm is in lat. $59^{\circ}20'33''$ N., and that at the Cape of Good Hope in lat. $33^{\circ}56'3''$ S. The declination of Sirius is $-16^{\circ}35'22''$:—find the altitudes of Sirius when in culmination at Stockholm and at the Cape of Good Hope respectively.

10. Define and explain the principal causes of the equation of time.

When the equation of time is—16 minutes, as it is on November 1, how does the forenoon from sunrise till 12 o'clock compare in length with the afternoon from 12 o'clock till sunset?

11. Prove that the parallax of a heavenly body at altitude is equal to the horizontal parallax multiplied by the sine of the apparent zenith distance.

Assuming the horizontal parallax of the sun to be $8''.8$, what is the horizontal parallax of Mars when nearest us, at a distance of 0.378 astronomical unit? (The astronomical unit is the distance from the Earth to the sun).

12. Explain the method of determining the distance of the Sun from the Earth by means of aberration. Assuming the velocity of light to be 186330 miles a second and $\sin 20^{\circ}5'$ —calculate the distance of the sun.

13. Calculate the greatest possible number of eclipses in a year.
14. Explain fully the methods of determining the longitude at sea.

1912

MATHEMATICS—PASS

First Paper

Attempt five questions from each group.

A.

1. (i) Find all positive angles less than π which satisfies
 $\cos \theta + \cos 5\theta = 0$.

(ii) Show that

$$\tan \left\{ \frac{1}{2} \sin^{-1} \left(\frac{2x}{1+x^2} \right) + \frac{1}{2} \cos^{-1} \left(\frac{1-x^2}{1+x^2} \right) \right\} = \frac{2x}{1-x^2}.$$

2. (i) If the internal bisector of the angle A of a triangle ABC meet the opposite side BC at D, show that

$$AD = \frac{2bc}{b+c} \cos \frac{A}{2}.$$

(ii) If the lengths of the internal bisectors of two angles of a triangle be equal, show that the triangle is isosceles.

3. Sum to n terms

(i) $\cos a + \cos (a + \beta) + \cos (a + 2\beta) + \dots$

(ii) $\tan \theta + 2 \tan 2\theta + 4 \tan 4\theta + \dots$

4. State and prove De Moivre's theorem for a positive fractional index, assuming it to be true for a positive integral index.

Find all the values of $(\cos \theta + i \sin \theta)^{\frac{1}{n}}$

Show that $\cos \theta + i \sin \theta = e^{i\theta}$.

If $A - Bi = \log (m + ni)$ show that

$$\tan B = \frac{n}{m}, \text{ and } 2A = \log (m^2 + n^2)$$

5. If $\cos \alpha + \cos \beta + \cos \gamma = 0$ and $\sin \beta + \sin \alpha + \sin \gamma = 0$, prove that $\cos 3\alpha + \cos 3\beta + \cos 3\gamma = 3 \cos (\alpha + \beta + \gamma)$.

B

1. (i) Find the equations of the two bisectors of the angles formed by the lines.

$$ax + by + c = 0 \text{ and } a'x + b'y + c' = 0.$$

(ii) Find the ratio in which the line joining (x_1, y_1) and (x_2, y_2) is divided by the line $ax + by + c = 0$.

2. Find the formulae for the transformation of co-ordinates when the axes (which are rectangular) are turned through an angle θ the origin remaining fixed.

If the expression

$$Ax^2 + 2Hxy + By^2$$

is thus transformed into

$$A'X^2 + 2HXY + B'Y^2,$$

prove that

$$A + B = A' + B' \\ AB - H^2 = A'A' - H'^2.$$

3. Find the equation of a circle whose centre is (α, β) and radius r .

Find the equation of a circle which passes through $(2, -1)$ $(2, 3)$ and $(4, -1)$ and obtain its radius and the co-ordinates of its centre.

4. Find the equation of the tangent to the circle $x^2 + y^2 = r^2$, at a point (x_1, y_1) on it.

Find the equation of the pair of tangents from (α, β) to the same circle.

5. If θ_1, θ_2 be the inclinations of two conjugate diameters of an ellipse to the major axis, prove that

$$\tan \theta_1 \tan \theta_2 = -\frac{b^2}{a^2}$$

Define the eccentric angle corresponding to a point on an ellipse, and represent it geometrically.

If ϕ and ψ be the eccentric angles of the extremities of two conjugate diameters, prove that

$$\phi - \psi = \pm \frac{\pi}{2}.$$

6. Deduce from the focus and directrix property of a parabola its equation in the form $y^2 = 4ax$.

Find the co-ordinates of the vertex and the length of the latus rectum of the parabola $y = ax^2 + bx + c$, the axes of co-ordinates being rectangular.

7. Define an asymptote to a conic and show that the co-ordinate axes are asymptotes of $xy = c^2$.

Show that any tangent to a hyperbola forms with its asymptotes a triangle of constant area.

8. Find the Cartesian equation of the ellipse referred to normal and tangent at a vertex as axes and transform it to polar co-ordinates.

If AP and AQ be any two chords, through the vertex A of an ellipse, which are right angles, prove that

$$\frac{1}{AP} + \frac{1}{AQ} = \text{constant}.$$

MATHEMATICS—PASS

Second Paper

Candidates are permitted to select ten questions.

1. Find, from first principles, the differential coefficients of $\log x$ and $\sin x$.

Calculate $\frac{dy}{d\theta}$ when $y = \cos. a. \log \sec. (\theta - a) + \theta \sin a.$

2. Apply Maclaurin's Theorem to obtain the expansion of $e^x \cos bx$ in ascending powers of x .

3. Evaluate

$$\frac{5 \sin x - 7 \sin 2x + 3 \sin 3x}{\tan x - x}, \text{ when } x = 0.$$

4. Prove that the centre of gravity of the triangle of maximum area inscribed in any ellipse is at the centre of the ellipse.

5. Prove that the portion of the tangent to the curves $x^{\frac{2}{3}} + y^{\frac{2}{3}} = a^{\frac{2}{3}}$ which is intercepted between the axes is of constant length.

6. In the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ prove that $p^2 p^3 = a^2 b^2$,

where p = radius of curvature.

p = central perpendicular on the tangent.

7. Perform the integrations :—

$$(i) \int \frac{ax+b}{bx+a} dx.$$

$$(ii) \int \frac{d\theta}{1+\sin \theta};$$

$$(iii) \int \frac{dx}{x^2 \sqrt{a^2-x^2}}.$$

8. Prove that, with certain limitations on the value of the constants involved

$$\int_{\beta}^x \frac{dx}{\sqrt{(a-x)(x-\beta)}} = 2 \cos^{-1} \sqrt{\frac{a-x}{a-\beta}}$$

and evaluate

$$\int_{\alpha}^{\beta} \frac{dx}{\sqrt{(x-\alpha)(\beta-x)}}.$$

9. Find the area included between $y^2 = 2x$ (parabola) and $y^2 = 4x - x^2$ (circle).

10. Find the length of the arc of the parabola $x = 2\sqrt{ay}$ from the vertex to one extremity of the latus rectum.

11. Integrate $(y^2 - 2x^2)y dx + (2y^2 - x^2)x dy = 0$.

12. Integrate $\frac{d^3y}{dx^3} - 4 \frac{d^2y}{dx^2} + 5 \frac{dy}{dx} - 2y = 0$.

MATHEMATICS—PASS

Third Paper

Not more than four questions from each group to be attempted.

A

1. Find the specific gravity of mixture of given volumes of any number of fluids whose specific gravities are given.

Two liquids are mixed together, first by weights in the proportion of their volumes of equal weights, and secondly by volumes in the proportion of their weights of equal volumes; compare the specific gravities of the two mixtures.

2. Distinguish between whole pressure and resultant pressure.

A cubical vessel is filled with two liquids of given densities, the

volume of each being the same ; find the pressure on any side of the vessel.

3. Prove that the depth of the centre of pressure of a trapezium immersed in water with the side a in the surface and the parallel side b at a depth, c below the surface, is

$$\frac{a+3b}{a+2b} \cdot \frac{c}{2}.$$

4. Define metacentre and curve of buoyancy.

A triangular lamina is floating with its plane vertical and vertex downwards. Prove that the curve of buoyancy is a hyperbola.

5. Prove that if a series of heights be taken in arithmetic progression the densities of air will decrease in geometric progression.

6. Describe Smeaton's air-pump.

If the volume of the receiver in a Smeaton's air pump is 5 times that of the barrel, find the pressure in the receiver after 3 strokes of the piston, the barometric height being 30 inches.

7. A cylindrical bell 4 feet long whose volume is 20 cubic feet is lowered into water until its top is 14 feet below the surface of the water, and air is forced into it until it is $\frac{3}{4}$ full. What volume would the entire quantity of air occupy under atmospheric pressure the water barometer standing at 33 feet ?

B

8. Define the terms vertical circles, right ascension, declination, latitude of a star.

What are the right ascensions and declinations of the sun on the following days ; March 21, June 22, September 23, Dec. 22 ?

How far is the sun from the zenith at noon on March 21, as seen at Pulkowa, latitude $59^{\circ}46' N$?

9. What are geographical and geocentric latitudes ?

Explain the method of finding the latitude of a place by observations of circumpolar stars.

The meridian zenith distances of a circumpolar star are $47^{\circ}28'$ and $22^{\circ}18'$; given that the tangents of these angles are $1'09$ and $0'41$ respectively, and the coefficient of refraction is $58''$ find the latitude of the place free from the errors in refraction of the observed zenith distance.

10. Explain the annual cycle in the length of daylight at a place on the equator, at a place in the temperate regions and at a place on the arctic circle.

Show that at a place on the arctic circle the azimuth of the sun at rising is greater than the sun's longitude by 90° ,

11. Explain, by a diagram, the phases of the moon.

Prove that the ratio of the illuminated part of the moon's disc to the whole disc is $1 + \cos \theta : 2$, where θ is the angle subtended at the moon by the arc joining the sun to the earth.

12. What is meant by the parallax of the sun and parallax of Sirius?

Taking the earth's radius as 4000 miles, sun's parallax as $8.8''$, parallax of Sirius as $0.15''$ find the distance of Sirius approximately.

13. What is Chaldean Saros? Explain its connexion with eclipses.

Calculate the least possible number of eclipses in a year.

14. Define sidereal time and mean solar time.

Explain how to deduce the mean solar time from the corresponding sidereal time.

1913

MATHEMATICS—PASS

First Paper

Candidates are allowed to attempt ten questions only.

1. Find an expression for all the angles which have a given sine.

Find the general solution of :

$$(1) \sin x + \sqrt{3} \cos x = 1$$

$$(2) \tan x + \cot x = 4$$

2. D is the middle point of the side BC of a triangle ABC. Prove that :

$$(1) 2 \cot ADC = \cot B + \cot C,$$

$$(2) \cot BAD = 2 \cot A + \cot B.$$

3. Sum to n terms the following series :

$$(1) \sin a + \sin(a + \beta) + \sin(a + 2\beta) + \dots$$

$$(2) \sin^3 a + \sin^3(a + \beta) + \sin^3(a + 2\beta) + \dots$$

4. Prove that

$$(1) \sin^{-1} x + \sin^{-1} y = \sin^{-1} (x \sqrt{1 - y^2} + y \sqrt{1 - x^2})$$

$$(2) \tan^{-1} \frac{yz}{xr} + \tan^{-1} \frac{xz}{yr} + \tan^{-1} \frac{xy}{zr} = \frac{\pi}{2},$$

where $r^2 = x^2 + y^2 + z^2$ and x, y, z are real.

5. State and prove De Moivre's Theorem completely for a real index.

6. Find the condition that the straight lines $a_1x + b_1y + 1 = 0$ and $a_2x + b_2y + 1 = 0$ should be mutually perpendicular, the axes of co-ordinates being rectangular.

Prove that

$$(x-p^2) + 2h(x-p)(x-q) - (y-q)^2 = 0$$

represents a pair of straight lines at right angles.

7. Perpendiculars are drawn from the origin to the straight lines whose equations are $x + 2y = 3$, $2x + 3y = 5$. Find the equation of the straight line joining the feet of the perpendiculars.

8. Find the length of the tangent from (x_1, y') to the circle $a(x^2 + y^2) + 2gx + 2fy + c = 0$.

Find the radical axis of the circles.

$$x^2 + y^2 + 4x - 4y + 7 = 0$$

$$x^2 + y^2 - 6x + 2y - 3 = 0$$

State and prove the significant property of this line.

9. Show that either of the lines $y = mx \pm \sqrt{a^2m^2 + b^2}$ touches the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} - 1 = 0$

Find the equation of each of the two tangents to the ellipse $\frac{x^2}{25} + \frac{y^2}{9} - 1 = 0$ from the point $(-15, -7)$.

10. Define pole and polar with respect to an ellipse.

Prove that collinear poles have concurrent polars and vice versa.

11. If θ and ϕ are the eccentric angles of the extremities of a chord of the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} - 1 = 0$$

show that its equation is

$$\frac{x}{a} \cos \frac{\theta + \phi}{2} + \frac{y}{b} \sin \frac{\theta + \phi}{2} = \cos \frac{\theta - \phi}{2}$$

If the chord passes through a focus, prove that

$$\tan \frac{\theta}{2} \tan \frac{\phi}{2} \times \frac{r-e}{1+e} = 0$$

12. Find the equations of the tangent and normal at the point $(am^2, 2am^2)$ on the parabola $y^2 = 4ax$ (axes rectangular).

The normal to the parabola at $(am_1^2, 2am_1)$ meets the curve again at $(am_2^2, 2am_2)$. Prove that $m_1^2 + m_1m_2 + 2 = 0$.

13. Find the equation of the tangent at (x_1, y_1) to the rectangular hyperbola $x^2 - y^2 = a^2$.

Show that the tangents at the extremities of the latera recta of the hyperbola pass through the vertices of the conjugate hyperbola.

MATHEMATICS—PASS

Second Paper

Ten questions to be attempted.

1. If $x\sqrt{1+y} + y\sqrt{1+x} = 0$, express $\frac{dy}{dx}$ in terms of x .
2. Prove Taylor's Theorem, and apply it to expand $\log \sin(x+h)$.
3. OA, OP are radii of a circle of centre O. The angle AOP is a small quantity of the first order. PN is drawn perpendicular from P to OA. Prove that the triangle PNA is of third order.

Prove that $\frac{1}{p^2} = u^2 + \left(\frac{du}{d\theta}\right)^2$ where p is the perpendicular from the pole on the tangent to a plane curve.

4. Calculate p , when $\theta = \pm 1$ in
$$r = \frac{\theta^2}{\theta^2 - 1}$$
5. Establish the formula for the radius of curvature of $y = f(x)$ and apply it to the curve $y = \log \sin x$.
6. Prove that $\frac{x^2 + x + 1}{x^2 - x + 1}$ has 3 for its maximum value and $\frac{1}{3}$ for its minimum.
7. Find the value of

$$\frac{1 - \tan x}{1 - \sqrt{2} \sin x}$$

When $x = \frac{\pi}{4}$.

8. Establish from first principles that

$$\int_b^a e^x dx = e^b - e^a.$$

9. Integrate

$$\int \sqrt{x^2 + a^2} dx, \quad \int \frac{dx}{\sqrt{x^2 - 2x + 2}}$$

10. Integrate

$$\int x^2 e^x dx, \quad \int x \cos^2 x dx.$$

11. Integrate

$$\frac{dx}{(x^2 + a^2)(x^2 + b^2)} - \frac{x^3 dx}{(x^2 + 1)(x - 1)}.$$

12. Find the length of this complete cycloid.

$$x = a(\theta + \sin \theta)$$

$$y = a(1 - \cos \theta).$$

13. Trace the curve

$$y^2 = x^2, \quad \frac{a-x}{a+x}$$

Or, Calculate the arc of its loop.

14. Integrate

$$\frac{dx}{dy} + \frac{x}{y} = y^2.$$

15. Integrate

$$(2x + 3y - 5) \frac{dy}{dx} + (2x + 3y - 1) = 0.$$

MATHEMATICS—PASS

Third Paper

Not more than four questions from each group to be attempted.

A.

1. Prove that the whole pressure of a liquid on a surface is equal to the weight of a column of liquid of which the base is equal to the area of the surface and the height is equal to the depth of its centre of gravity below the surface of the liquid.

A circular cylinder (radius r and height h), closed at both ends, is just filled with liquid, and its axis is inclined at an angle θ to the vertical. Prove that the whole pressure on the curved surface is

$$w \pi r h (h \cos \theta + 2r \sin).$$

2. A circular area is just immersed vertically in water; prove that if the depth of its centre is doubled, the distance between its centre of pressure will be halved.

3. Find the conditions of equilibrium of a floating body.

An isosceles triangular lamina floats in liquid with its base horizontal. Show how to find the position of equilibrium when the base is above the surface.

4. Describe any kind of hydrometer. A piece of metal which weighs 15 ounces in water is attached to a piece of wood which weighs 20 ounces in vacuum, and the two together weigh 10 ounces in water. Find the specific gravity of the wood.

5. A hollow cylinder, open at the top is inverted, and partly immersed in water. Calculate the depth of the surface of the water within the cylinder.

6. Describe the common pump. If the length of the lower pipe of a common pump above the surface of the water is 16 feet and the area of the barrel of the pump 16 times that of the pipe, find the length of the stroke so that the water may just rise into the barrel at the end of the first stroke, the water barometer standing at 32 feet.

B

7. Define the terms the ecliptic, equinoxes, celestial longitude.

When the vernal equinox is rising on the eastern horizon what angle does the ecliptic make with horizon, at the point for an observer in Calcutta (lat $22^{\circ} 34' N$)?

What are the right ascension and declination of the sun, when its longitude is 6 hours?

8. Describe fully a transit instrument. How is the rate of error of the astronomical clock in an observatory exactly determined?

9. What is the equation of time? How does its magnitude vary through the year?

On November 1 the sun rises at 6 h. 56 m. and sets at 4h. 31m.—mean time, find the equation of time for that day.

10. Show that the effect of aberration is to make the stars, when referred to the celestial sphere describe small ellipses about their true places.

Prove that the aberration varies as the sine of the earth's way.

11. Explain the direct and retrograde motion of Venus. What are the stationary points in a planet's orbit?

12. What is the cause of a lunar eclipse? Why does the phenomenon not occur at every full moon? Explain the method of calculating the lunar ecliptic limits.

1914

MATHEMATICS—PASS

First Paper

Not more than eight questions are to be attempted.

I. TRIGONOMETRY

1. Find an expression giving all the values of $\sin^{-1} x$. What is its principal value?

$$\text{Solve } \sin^{-1} \frac{5}{x} + \sin^{-1} \frac{12}{x} = \frac{\pi}{2}$$

2. In a triangle ABC prove that

$$(i) \ a b c = 4 R S ;$$

$$(ii) \ r = 4 R \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}.$$

3. Find the sum of the series

$$\sin a + \sin 2a + \sin 3a + \dots + na.$$

Deduce from it, by making a very small, the sum of the series

$$1 + 2 + 3 + \dots + n.$$

4. Show that one of the n th roots of

$$\cos \theta + i \sin \theta \text{ is } \cos \frac{\theta}{n} + i \sin \frac{\theta}{n}.$$

$$\text{Find all the values } \left(\cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right)^{\frac{1}{3}}.$$

5. Expand $\sin \theta$ in powers of θ .

If $\sin \theta = \frac{1}{10} \frac{1}{1} \theta$, show that θ is $4^{\circ} 24'$ approximately.

II. ANALYTICAL GEOMETRY

1. Find the co-ordinates of a point which divides in a given ratio ($m_1 : m_2$) the line joining two given points (x_1, y_1) and (x_2, y_2).

Prove that the lines joining the middle points of opposite sides of a quadrilateral and the line joining the middle points of its diagonals meet in a point and bisect one another.

2. What is represented by

$$(a_1 + a_2 k)x + (b_1 + b_2 k)y + c_1 + c_2 k = 0,$$

where k is a variable parameter?

Find the equation of the straight line which passes through the intersection of $a_1 x + b_1 y + c = 0$, and $a_2 x + b_2 y + c^2 = 0$ and is perpendicular to $a_3 x + b^3 y + c_3 y + c_3 = 0$, the axes of co-ordinates being rectangular.

3. Show that the radical axes of three circles taken in pairs are concurrent.

If the three circles are given by $x^2 + y^2 + x + 2y + 3 = 0$, $x^2 + y^2 + 2x + 4y + 5 = 0$ and $x^2 + y^2 - 7x - 8y - 9 = 0$, find the co-ordinates of the point of concurrence of their radical axes.

4. Find the equation of the tangent at the point (x_1, y_1) on the parabola $y^2 = 4ax$.

Prove that the parabolas $y^2 = 4ax$ and $x^2 = 4ay$ cut each other at the point ($4a, 4a$) at an angle ϕ such that $\phi = \frac{\pi}{4}$.

5. Find the equation of the normal at any point (x_1, y_1) of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} - 1 = 0$

Show that the conditions that normals at (x_1, y_1), (x_2, y_2), and (x_3, y_3) may be concurrent is

$$\begin{vmatrix} x_1 & y_1 & x_1 y_1 \\ x_2 & y_2 & x_2 y_2 \\ x_3 & y_3 & x_3 y_3 \end{vmatrix} = 0$$

6. Define the hyperbola conjugate to a given hyperbola.

Show that the polar of any point on the conjugate hyperbola with respect to the given hyperbola touches the conjugate hyperbola.

Show that the polar of any point on the conjugate hyperbola with respect to the given hyperbola touches the conjugate hyperbola.

7. Find the locus of the middle points of the chords of an ellipse which pass through a fixed point.

MATHEMATICS—PASS

Second Paper

Candidates are permitted to select ten questions only.

1. Find, from first principles, the differential coefficient of $\sin x$
Given that

$$y = \log (x + \sqrt{x^2 - a^2}) + \sec^{-1} \frac{x}{a}$$

find the value of $\frac{dy}{dx}$ in its simplest form.

2. Establish Taylor's theorem.

Find the first four terms of the development of e^x , $\sec x$ in ascending powers of x .

3. Find the value of

$$\frac{2x - \sqrt{5x^2 - a^2}}{x - \sqrt{2x^2 - a^2}}$$

when $x = a$.

4. In a plane triangle, if the angles and sides receive small variations prove that, where a, b are constant,
 $\tan A. \Delta b = b \Delta C.$

5. In an ellipse, find when the rectangle under a pair of conjugate diameters is a maximum or a minimum.

6. Obtain the expression for the perpendicular from the origin on the tangent of a plane curve in the form

$$\frac{1}{p^2} = u^2 + \left(\frac{du}{dp}\right)^2$$

Find the length of the perpendicular from a focus on the tangent to an ellipse.

7. Establish the formula for radius of curvature in the form

$$p = r \frac{dr}{dp}.$$

Find the radius of curvature at any point on a parabola.

8. Integrate

$$\int \frac{dx}{1 - 2x + 2x^2}, \int \frac{dx}{\sqrt{x^2 - a^2}}$$

9. Integrate

$$\int \frac{x dx}{x^4 - 1}, \int \frac{dx}{x^2 + 6x + 8}$$

10. Prove that

$$\int_a^{\beta} \sqrt{(x-\alpha)(\beta-x)} dx = \frac{\pi}{8} (\beta-\alpha)^2.$$

11. Find the whole area of the Lemniscate

$$r^2 = a^2 \cos 2\theta.$$

12. Find the length of the logarithmic curve

$$y = ce^x$$

13. Integrate

$$\int (3y - 7x + 7)dx + (7y - 3x + 3)dy = 0.$$

14. Integrate

$$\cos^2 x \frac{dy}{dx} + y = \tan x.$$

15. Determine the curve whose subtangent is
- m
- times the abscissa of the point of contact, and find the particular curve which passes through the point (2, 3).

MATHEMATICS—PASS

Third Paper

Not more than four questions from each group are to be attempted.

A

1. Define whole pressure and resultant pressure.

Prove that the whole pressure of a liquid on a surface is equal to the weight of a column of liquid of which the base is equal to the area of the surface and the height is equal to the depth of its centroid below the surface of the liquid.

Show how to draw a horizontal line in a square immersed in a liquid with one side in the surface, so as to divide the square into two portions, the thrusts on which are the same.

2. Find the centre of pressure of a circle, wholly immersed with its plane vertical in a homogeneous liquid.

3. Prove that the depth of the centre of pressure of a parallelogram two of whose sides are horizontal and at depths
- h
- ,
- k
- , below the surface, of a liquid whose density varies as the depth below the surface, is

$$\frac{3}{4} \frac{h^3 + h^2k + hk^2 + k^3}{k^2 + hk + k^3}$$

4. A hollow cone filled with water is held with its vertex downwards; find the resultant pressure on either of the portions into which it is divided by a vertical plane through its axis.

5. Define *metacentre* and explain what is meant by *stability of equilibrium*.

A solid cone and a solid hemisphere which have their bases equal, are united together, base to base, and the solid thus formed floats in water with its spherical surface partly immersed; find the height of the cone in order that the equilibrium may be neutral.

6. If a body floats in liquid with volumes V_1, V_2, V_3 above the surface when the barometric heights are respectively h_1, h_2, h_3 . prove that

$$h_1 V_1 (V_2 - V_3) + h_2 V_2 (V_3 - V_1) + h_3 V_3 (V_1 - V_2) = 0.$$

7. A cylindrical diving-bell of height a is furnished with a barometer and lowered into a fluid: the heights of the mercury in the barometer before and after immersion being h and h' respectively, show that the depth of the bottom of the bell below the surface of the fluid is equal to

$$\left(\frac{a}{p} + \frac{a}{h'} \right) (h' - h)$$

where a is the specific gravity of mercury p and that of the fluid.

B

8. Define the terms—the *Prime vertical*, *azimuth*, *hour angle*, and *right ascension*.

Show that the right ascension of a star is the same as the sidereal time at the moment when the star is crossing the observer's meridian.

What are the right ascension and declination of the north pole of the ecliptic.

9. Describe a transit instrument, and explain what is meant by the level error, collimation error, and deviation error.

10. What is the cause of twilight?

Determine the limits of the latitude of places at which twilight lasts all night long, when the sun's declination is 14° N.

11. Give direct explanation of the effect of aberration on the positions of stars.

Prove that aberration $= 20''.5 \sin$ (earth's way).

What is diurnal aberration?

12. Explain the direct and retrograde motion planet.

Prove that the apparent motion of the planet Mars is retrograde when we are closest to it, and direct when we are farthest from it.

13. Define the *equation of time*, and fully explain the causes from which it arises.

Show by a graphical construction that the equation of times vanishes four times in the year.

14. Explain the method of determining the mass of a planet which has a satellite.

The semi axis major of the orbit of the double star α -Centauri is 23.3 times the distance of the earth from the sun and the period of revolution is 77 years : hence find the sum of the masses of the two components of the double star.

1915

MATHEMATICS—PASS

First Paper

Full marks will be given for correctly answering ten questions.

1. Prove that

$$\sin(A+B) = \sin A \cos B \text{ when both } A \text{ and } B \text{ are acute.}$$

Prove that if $\sin A$ be known, $2 \cos \frac{A}{2}$ may have any of the

$$\text{value } \pm \sqrt{1 + \sin A} \pm \sqrt{1 - \sin A}$$

Prefix the proper signs to the roots when $A = 80^\circ$

2. Find $\sin 18^\circ$ and the general solution of

$$4 \sin 4\theta + 1 = \sqrt{5}.$$

Prove that

$$\sin^{-1} \frac{1}{3} + \sin^{-1} \frac{1}{3\sqrt{11}} + \sin^{-1} \frac{1}{\sqrt{11}} = \frac{\pi}{2}$$

3. In any triangle ABC prove the following relations.

$$(i) s = 4R \cos \frac{A}{2} \cos \frac{B}{2} \cos \frac{C}{2} \text{ where } 2s = a + b + c$$

$$(ii) \frac{1}{2Rr} = \frac{1}{ab} + \frac{1}{ac} + \frac{1}{bc}$$

4. Assuming De Moivre's Theorem, prove that.

$$\cos a \mid 1 - \frac{a^2}{2!} + \frac{a^4}{4!} - \dots$$

$$\sin a \mid a - \frac{a^3}{3!} + \frac{a^5}{5!} - \dots$$

5. Find all the fifth roots of -1 .

If $x + \frac{1}{x} = \sqrt{3}$, find the value of $x^{12} + x^{-12}$

6. Sum to n terms each of the following series ;

$$(i) \sin \alpha - \sin (\alpha - \beta) + \sin (\alpha - 2\beta) - \dots$$

$$(ii) \sec \theta. \sec 2\theta + \sec 2\theta. \sec 3\theta + \sec 3\theta. \sec 4\theta + \dots$$

7. Find the area of a triangle in terms of the co-ordinates of its vertices, the axes being rectangular.

The coordinates of A, B, C are $(6, 3), (-3, 5), (4, -2)$ respectively, and P is the point (x, y) ; show that

$$\frac{\Delta PBC}{\Delta ABC} = \frac{x+y-2}{7}.$$

8. Transform the equation.

$$x^2 - y^2 - 2\sqrt{2}x - 10\sqrt{2}y + 2 = 0$$

when the axes of coordinates, which are rectangular, are turned through $\frac{\pi}{4}$ after establishing the formulae for the transformation.

9. Find the equation of a circle having its centre at (α, β) and radius r and show that the equation of the tangent at the point (x_1, y_1) may be written as

$$(x_1 - \alpha)(x - \alpha) + (y_1 - \beta)(y - \beta) = 0.$$

10. Find the condition that the line $ix + my = 1$ touches the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} - 1 = 0.$$

Find the equation of the Director Circle.

11. Given the parabola $y^2 - 4ax = 0$, find the equations of the tangent and normal at the point $(am^2, 2am)$.

Prove that the focus of the intersection of the normals at the extremities of a chord is another parabola.

12. Find the equations giving the asymptotes of the hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} - 1 = 0$. Transform the equation of the hyperbola, taking the asymptotes as the axes of coordinates.

Any two points P and Q are taken on a hyperbola with centre C . Lines through P and Q parallel to the asymptotes meet in K . Prove that CK bisects PQ .

13. Find the polar equation of an ellipse referred to the focus as pole and the major axis as the initial line.

Find the equation of the tangent at the point P given by the vectorial angle α .

MATHEMATICS—PASS

Second Paper

Candidates are permitted to attempt ten questions only.

1. Find, from first principles, the differential coefficient of x^3 . Calculate $\frac{dy}{dx}$ in its simplest form when

$$y = \frac{x(x^2 - 1)}{(x^2 + 1)^2} + \tan^{-1} x.$$

2. If $xy = ae^x + be^{-x}$ prove that

$$x \frac{d^2 y}{dx^2} + 2 \frac{dy}{dx} = xy.$$

3. Establish the expansion

$$\tan^{-1} x = x - \frac{1}{3}x^3 + \frac{1}{5}x^5 - \frac{1}{7}x^7 + \dots$$

4. Evaluate

$$x \sin \frac{\pi x}{2}$$

$$(i) \quad \frac{\pi x}{\cos x}, \text{ when } x = \frac{\pi}{2}.$$

$$(ii) \quad (1-x) \tan \frac{\pi x}{2}, \text{ when } x = 1.$$

5. Find the values of x which make

$$\frac{(x-1)(x-6)}{x-10}$$

a maximum and a minimum respectively.

6. In the plane curve

$$y = a^x$$

prove that the subtangent is of constant length.

7. In the equilateral hyperbola
- $r^2 \cos 2\theta = a^2$
- , prove that

$$pr = a^2.$$

8. Find the radius of curvature at any point on the catenary

$$y = \frac{a^x}{2(e^a + e^{-a})}.$$

9. Integrate

$$(1) \int \frac{dx}{x^2 + 9x + 20}, \quad (2) \int \frac{dx}{x^2 + 3x + 5}$$

10. Integrate

$$(1) \int \frac{dx}{\sqrt{1-x-x^2}} \quad \int \sqrt{a^2+x^2} dx$$

11. Calculate the area of one loop of the curve
-
- $a^4 y^2 = x^4 (a^2 - x^2).$

12. Find the length of the arc of the curve
-
- $y = \log \sec x$

from

$$x = 0 \text{ to } x = \frac{\pi}{3}$$

13. Integrate

$$\left(\frac{y-x}{y^2} \right) \frac{dy}{dx} + \frac{2xy+1}{y} = 0$$

14. Integrate

$$2x^2 y \frac{dy}{dx} + y + 2xy^2 - x^2 y^3 = 0$$

15. Integrate

$$\frac{d^2 y}{dx^2} - 6 \frac{dy}{dx} + 25y = 0$$

MATHEMATICS—PASS

Third Paper

Not more than **four** questions from each group to be attempted.

A

1. A triangular area is wholly immersed in a liquid with one side in the surface. Prove that the horizontal straight line in the plane

of the area through its centre of pressure divides it into portions, the pressures on which are equal.

2. A hollow cone, filled with water and closed, is held with its axis horizontal; find the resultant vertical pressure on the upper half of its curved surface.

3. Define *stability of equilibrium* and *metacentre*.

Prove that the position of equilibrium of a floating solid are obtained by drawing normals from the centre of gravity of the solid to the surface of buoyancy.

4. Explain fully the method of determining height of one station above another by means of barometric observations at each.

Prove that the height of the homogeneous atmosphere is the same at all places at the same temperature.

5. If an air pump be fitted with a barometer gauge of small section k and length l , prove that at the end of the first stroke the mercury will have risen a height,

$$\frac{Bh}{A+B} \left\{ 1 - k \frac{Ah + (A+B)l}{(A+B)^2} \right\} \text{ nearly,}$$

h being the height of the barometer.

6. Show how to find the specific gravity of a liquid by the use of Nicholson's hydrometer.

A solid is placed in the upper cup of a Nicholson's hydrometer and it is then found that 5 oz. are required to sink the instrument to the fixed point; when the solid is placed in the lower cup 7 oz. are wanted and when the solid is taken away altogether 10 oz. are required. What is the specific gravity of the solid?

B.

7. Describe Foucault's pendulum experiment for the latitude of Calcutta, and give its explanation.

8. Prove that the altitude of the celestial pole above the horizon is equal to the latitude of the place.

The sun's meridian altitude was found on November 23 to be $62^{\circ} 41' 15''$. The chronometer indicated 7 h. 43 m. 14 s. The sun's declination at the preceding noon at Greenwich (as given by Nautical Almanac) was $20^{\circ} 23' 36''$, and the hourly change in the declination $30''.7$. From these data find the latitude of the ship.

9. Prove that amount of refraction varies approximately as the tangent of the star's zenith distance.

The meridian altitudes of a circumpolar star are 20° and 30° the corresponding corrections for refraction are $1' 40''$ and $1' 9''$; find the latitude of the place.

10. Describe any method of finding the first Point of Aries.

Represent by a diagram the position of the ecliptic relative to the meridian and horizon of Calcutta at noon, at the autumnal equinox. Under what circumstances of place and time would the ecliptic coincide with the prime vertical?

11. Explain fully the nature of the phenomena (a) *precession of the equinoxes*, (b) *nutation*.

By what observations may their existence be detected?

12. What are the *stationary points*?

When a superior planet is stationary, show that its angular distance from the sun is

$$\pi - \tan^{-1} \frac{n}{\sqrt{1+n}}$$

when n is the ratio of radius of its orbit to that of the earth.

1916

MATHEMATICS—PASS

First Paper

Only eight questions to be attempted.

1. Prove that the distance between the orthocentre and the centre of the circumscribed circle of a triangle is

$$R \sqrt{1 - 8 \cos A \cos B \cos C}.$$

2. State and prove De Moivre's Theorem.

3. Reduce $(a + \beta)^{x+i}$ to the form $A + iB$.

4. Sum the infinite series

$\sin a + c \sin(a + \beta) + c^2 \sin(a + 2\beta) + c^3 \sin(a + 3\beta) + \dots$
 c being less than unity.

5. Prove—

$$\frac{\theta}{\tan \theta} = \left(1 - \tan^2 \frac{\theta}{2}\right) \left(1 - \tan^2 \frac{\theta}{2^2}\right) \left(1 - \tan^2 \frac{\theta}{2^3}\right) \dots$$

6. Find the condition that the lines

$$y = m_1x + c_1$$

$$y = m_2x + c_2$$

may be (i) parallel, (ii) at right angles.

Or,

A variable straight line is drawn through a given point O to cut two fixed straight lines in R and S; on it a point P is taken such that

$$\frac{2}{OP} = \frac{1}{OR} + \frac{1}{OS}$$

- Prove that the locus of P is a third fixed straight line.

7. Find the condition, that two given circles may intersect orthogonally.

Or,

Find where the line $3x + 4y + 7 = 0$ cuts the circle

$$x^2 + y^2 - 4x - 6y - 12 = 0$$

8. Prove that the circle circumscribing the triangle formed by any three tangents to a parabola passes through the focus.

Or,

Find the locus of point of intersection of two tangents to a parabola which are at right angles to one another.

9. Prove that the angle ϕ between the pair of tangents from x', y' to the curve.

$$\frac{x'^2}{a^2} + \frac{y'^2}{b^2} = 1,$$

is given by the equation

$$\tan \phi = \frac{2ab \sqrt{\left(\frac{x'^2}{a^2} + \frac{y'^2}{b^2} - 1\right)}}{x'^2 y'^2 - a^2 - b^2}$$

10. Find the equation to hyperbola referred to its asymptotes.

Prove that the equation to any tangent to the curve $xy = c^2$ can be expressed in the form

$$\frac{x}{h^1} + y t_1 + 2c.$$

11. TP, TQ are the tangents drawn from an external point (z, y) to the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} - 1 = 0$$

shew that, if S be a focus

$$\frac{ST^2}{SP \cdot SQ} = \frac{x^2}{a^2} + \frac{y^2}{b^2}$$

Or,

Find the locus of the point of intersection of two tangents to an ellipse which are at right angles to one another.

12. Find the equation of the chord of $2xy = c^2$, whose middle points is (a, β)

Prove that the locus of the middle point of a chord of $2xy = c^2$, which is of constant length $2k$, is

$$c^2(x + y^2) = 2xy(x^2 + y^2 - k^2);$$

Or,

Prove that the sum of the squares of two conjugate diameters of a hyperbola is constant.

MATHEMATICS—PASS

Second Paper

Only ten questions to be attempted.

1. Find, from first principles, the differential coefficient of $\log x$ of $\tan x$.

If $\sec y = x^2$, prove that

$$\frac{dy}{dx} = \frac{2}{x\sqrt{x^4 - 1}}$$

2. If $y = x^3 \log x$, prove that

$$\frac{d^4 y}{dx^4} = \frac{6}{x}$$

3. Enunciate Taylor's Theorem. Deduce the expansion for $(x+h)^n$.

4. Given $y = (x-1)(x-2)^2$, prove that $x=2$ gives y a minimum value.

5. Calculate the length of the subnormal in the parabola $y^2 = ax$.

6. Prove that the pedal equation of the cardioid

$$r = a(1 - \cos \theta) \text{ is } 2ap^3 = r^3,$$

7. Prove the formula for radius of curvature

$$p = r \frac{dr}{ap}$$

Apply it to the curve

$$p^2 = ar^2 + b.$$

8. Calculate, from first principles, the value of

$$\int_a^b e^x dx,$$

9. Perform the integrations

$$(i) \int \cos x \left(\frac{1}{\sin x} + \frac{1}{\sin^2 x} \right) dx;$$

$$(ii) \int \frac{dx}{x^2 + 7x + 12}.$$

10. Prove that

$$\int_0^a \frac{dx}{a^2 + x^2} = \frac{\pi}{2a}$$

Or,

$$\int_0^a \frac{dx}{\sqrt{a^2 - x^2}} = \frac{\pi}{2}$$

11. Evaluate

$$\int \cos^4 x dx$$

calculate its value between the limits

$$x = \frac{\pi}{\gamma}, \quad x = 0.$$

12. Calculate the area bounded by a parabola and its latus-rectum.

13. Define the intrinsic equation of a curve, and obtain it for a circle.

14. Solve $\left(\frac{x+y}{y} \frac{y}{x} \right) \frac{dy}{dx} = 1.$

15. Solve $\frac{d^2 y}{dx^2} = a^2 y.$

MATHEMATICS—PASS**Third Paper**

Only six questions are to be attempted, three from each group.

A.

1. Define fluid and pressure at a point in a fluid. Show that the pressure at a point in a fluid at rest is the same in all directions.

2. Establish the equation $p = \rho g x$ in the case of a heavy homogeneous liquid at rest.

Three fluids whose densities are in A. P. fill a semicircular tube whose bounding diameter is horizontal. Prove that the depth of one of the common surfaces is double that of the other.

3. Find the centre of pressure of a triangle whose base is in the surface of a homogeneous heavy liquid (i) when the surface is not exposed to pressure, and (ii) when it is exposed to uniform pressure.

4. Find the condition of equilibrium of a heavy body floating freely in a liquid.

If a body be floating partially immersed in a liquid placed in the receiver of an air pump and the air be partially pumped out, will it rise or sink? Give reasons for your answer.

5. State Boyle's law connecting the pressure and volume of a gas at constant temperature, and show how it is experimentally established for compression.

A hollow cone is immersed mouth downwards in water the surface of which is exposed to atmospheric pressure. Show how far it may be depressed so that the water within the glass may rise half way up it.

6. Describe Nicholson's hydrometer and show how it can be used to compare—

- (1) the specific gravities of two liquids; and
- (2) the specific gravities of a liquid and a solid

B

1. Define Altitude, Azimuth. Right Ascension and Declination of a heavenly body and exhibit them on the celestial sphere.

Are there different celestial spheres for different positions of an observer? Give reasons for your answer.

Show that the altitude of a star is greatest when on the meridian.

2. Describe fully a transit instrument. State what conditions are to be satisfied so that the instrument may be perfectly adjusted.

3. Explain by a diagram the phases of the moon as seen from the earth.

Find the apparent breadth of the illuminated surface of the moon when θ is the angle subtended at the moon by the earth and the sun.

4. Explain the phenomenon of twilight.

If it lasts all night at a place of latitude l , prove that $l + \delta$ is not less than 72° , where δ is the declination of the sun.

5. What are the conditions for a lunar eclipse?

Is it ever possible to see the moon eclipsed when the sun still appears shining in the heavens? If so, to what cause is such a phenomenon due?

6. Show how at sea you can find "ship meantime" and describe the method of finding the longitude at sea by the chronometer.

1917

MATHEMATICS

First Paper

Candidates are permitted to attempt ten questions only.

1. In a plane triangle, prove that

$$\text{Area} = \frac{1}{2} \sin A = \frac{abc}{4R}$$

Or,

Prove geometrically that

$$\sin 15^\circ = \frac{1}{4}(\sqrt{6} - \sqrt{2}).$$

2. Trace the changes in the sign and magnitude of

$$(i) \cot x;$$

$$(ii) \sin x + \cos x;$$

as x varies from 0 to $2x$.

Or,

Form a general expression for all angles whose sine is given and find all the values of θ which satisfy $\sin^2 \theta = \sin^2 \alpha$.

$$3. (1) \text{ Solve } \tan^{-1} + \cot^{-1} x = \frac{\pi}{9}$$

(2) Find the value of $\sin(\sin^{-1}\frac{1}{2} + \cos^{-1}\frac{1}{2})$.

4. Prove the theorem of De Moivre that
 $\cos n\theta + \sqrt{-1} \sin n\theta$

represents the values of $\{\cos \theta + \sqrt{-1} \sin \theta\}^n$ when n is a positive integer.

Find the three cube roots of unity.

5. Prove the formula

$$\sin n\theta = n \cos^{n-1} \theta \sin \theta - \dots$$

Establish the series of Gregory

6. Expand $\sin \theta$ in ascending power of θ .

$$\theta = \tan \theta - \frac{1}{3} \tan^3 \theta + \dots$$

Deduce $\pi = 4(1 - \frac{1}{3} + \frac{1}{5} - \dots)$

7. Explain how the position of a point is defined by its Cartesian co-ordinates.

The co-ordinates (x, y) of a real point satisfy the single relation $x^2 + y^2 - 2x - 4y + 5 = 0$. Ascertain the locus of the point.

8. Find the length of perpendicular drawn from any point (h, k) on the line

$$x \cos \alpha + y \sin \alpha = p.$$

Determine a point equally distant from the three lines.

$$x \cos 30^\circ + y \sin 30^\circ = 2,$$

$$x \cos 45^\circ + y \sin 45^\circ = 2,$$

$$x \cos 60^\circ + y \sin 60^\circ = 2.$$

9. Prove that $x^2 + 2hxy - y^2 = 0$ represents a pair of straight lines at right angles to each other.

Find the centre and radius of the circle

$$x^2 + y^2 + 2gx - 2fy + c = 0.$$

10. Prove that the radii of the circles

$$x^2 + y^2 = 1,$$

$$x^2 + y^2 - 2x - 6y = 6,$$

$$x^2 + y^2 - 4x - 6y = 12.$$

Find points of contact.

11. Obtain the equation of a parabola in the form

$$y^2 = 4ax.$$

Prove that $y = 2x + \frac{a}{x}$ is a tangent

12. Form the equation of the polar of the point (x_1, y_1) with regard to

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

13. Prove that the polars of any point with regard to

$$\frac{y^2}{3} + \frac{x^2}{5} = 1 \text{ and } \frac{x^2}{3} + \frac{y^2}{5} = 2$$

are parallel.

14. Prove that the sum of squares of the reciprocals of two perpendicular diameters of an ellipse is constant.

15. Prove that

$$\frac{x}{a} \cos \frac{\alpha + \beta}{2} + \frac{y}{b} \sin \frac{\alpha + \beta}{2}$$

is the chord through the points

$$(a \cos \alpha, b \sin \alpha), (a \cos \beta, b \sin \beta)$$

on the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

Show that the chord will be parallel to the axis, if $(\alpha + \beta)$ is an odd multiple of π .

16. Give a sketch of the hyperbola $x^2 - y^2 = 4$.

Prove that the origin bisects every chord of this hyperbola which passes through it.

MATHEMATICS—PASS

Second Paper

Candidates are permitted to attempt ten questions only.

1. Find, from first principles, the differential co-efficient of x^2 or of $\sin x$.

Find $\frac{dy}{dx}$, when $y = \sin (\log x)$,

2. If $y = a \cos nx + b \sin nx$, prove that $\frac{d^2 y}{dx^2} + n^2 y = 0$.

3. Expand $\log (1+x)$ or $\tan^{-1} x$ in a series of ascending powers of x .

4. OA, OP are radii of a circle with centre O. The angle AOP is a small quantity of the first order. Prove that (arc AP - chord AP) is of the third order.

5. Evaluate :

$$(1) \frac{1 - \cos \theta}{\theta^2}, \text{ when } \theta = 0.$$

$$(2) \frac{a - \sqrt{a^2 - x^2}}{x^2}, \text{ when } x = 0.$$

6. Prove that the minimum value of $x^2 - 4x + 9$ is 5.

Or, Prove that the maximum value of $a \sin \theta + b \cos \theta$ is $\sqrt{a^2 + b^2}$.

7. In the parabola $y^2 = 4ax$, prove that

$$\frac{ds}{dx} \sqrt{1 + \frac{a}{x}}$$

8. Form the pedal equation of

$$r^m = a^m \sin m\theta$$

in the shape

$$\frac{p}{a} = \left(\frac{r}{a}\right)^{m+1}$$

9. Prove that the radius of curvature in

$$y = \log \sin x \text{ is } p = \operatorname{cosec} x$$

Or,

Prove that

$$p = r \frac{dr}{dp}$$

10. Prove, from first principles, that

$$\int_a^b \sin x, dx = \cos a - \cos b.$$

11. Integrate :

$$(1) \int \frac{dx}{x^2 + 8x + 15}.$$

$$(2) \int x \cos nx \, dx.$$

12. Integrate :

$$(1) \int \sqrt{a^2 - x^2} dx;$$

$$(2) \int \frac{dx}{3 + 2 \cos x}$$

13. Prove that the perimeter of the cardioid

$$r = a(1 - \cos \theta) \text{ is } 8a.$$

14. Obtain the area of the semicircle bounded by $r = a \cos \theta$ and the initial line,

15. Integrate

$$xy \frac{dy}{dx} = \frac{x^2 + 1}{y + 1}$$

Or,

$$x \frac{dy}{dx} + y = x^2$$

16. Integrate

$$(x^2 + y^2) \frac{dy}{dx} = xy$$

by the transformation $y = vx$, or otherwise.

Or,

$$\text{Integrate} \quad \frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = 0.$$

MATHEMATICS—PASS

Third Paper

Only nine questions are to be attempted : but not more than six from any one group.

A

1. Prove the formula $p = g \rho h$ explaining the notation.
2. The lower ends of two vertical tubes, whose cross-sections are 1 and $\frac{1}{16}$ th square inches respectively, are connected by a tube. The tubes contain mercury (sp. gr. 13.6). How much water must be poured into the larger tube so as to raise the level of the mercury in the smaller tube by one inch?
3. Establish $P = w Sz$, for a plane surface immersed in a heavy homogeneous liquid at rest, not exposed to the atmosphere, P being the whole pressure on the area S and z the depth of the C. G. of the area below the surface.
4. ABC is a triangular area immersed vertically in water with C in the surface and AB horizontal. Show how to divide the area by a horizontal line PQ into two portions on which the pressures are equal, P and Q being points in AC and BC respectively.
5. Define Centre of pressure.

If a vertical lamina immersed in water descends vertically does the P. C. approach or recede from the C. G. of the lamina? Give reasons for your answer.

6. Find the depth of the C. P. of a uniform rectangular lamina immersed in water with its plain vertical and one side in the surface.

7. Establish the conditions of equilibrium of a body freely floating in a liquid at rest.

8. Show that a homogeneous solid in the shape of a right circular cone, can float in a liquid of twice its density with its axis horizontal.

9. State Boyle's Law and deduce from it $p = k \rho$, explaining the notation.

10. Describe the use of the Hydrostatic balance in finding the specific gravity of a body which would sink in water.

B

11. Draw the celestial sphere for an observer in 26° Lat. North and indicate on it—the Azimuth, Hour angle, Right Ascension, Declination, Latitude and Longitude, of a star.

12. When the first point of Aries is rising on the eastern horizon of an observer in in 25° Lat. North, find the inclination of the ecliptic to the horizon.

13. Define 'Sidereal year,' 'Tropical year' 'Sidereal day' and 'Mean solar day'.

Prove that one mean solar day = one day plus four minutes minus four seconds, of sidereal time approximately.

14. Given that the first point of Aries has an annual retrograde motion of $50'22''$ along the ecliptic among the stars and the Tropical year consists of $365\frac{1}{4}$ mean solar days in a sidereal year.

15. Prove that refraction is $k \tan z$ approximately. Within what limit of the zenith distance has this law been found to be nearly true?

16. Find the latitude of a place at which the upper and lower meridian altitudes of a circumpolar star are 30° and 60° respectively, the refraction for the zenith distance of 45° being $57''$.

17. Show how the horizontal parallax of the moon is found by two simultaneous observations of the moon from stations of nearly the same meridian.

18. It is observed that the same face of the Moon approximately is always turned towards the earth in her orbital revolution round the earth. What are the deductions made from this observation?

19. Explain the Moon's Librations.

20. Explain what is meant by the Annual Parallax and Annual Aberration of a Star.

1918

MATHEMATICS—PASS

First Paper

Answer any ten questions.

1. Obtain a formula for all angles whose cosine is equal to a given quantity and solve the equation :

$$2 \cos^2 x - 3 \cos x + 1 = 0.$$

2. Prove that the two equations

$$\sin^{-1} x = 60^\circ$$

and $4x^3 - 3 = 0$

have a common solution, and find it.

3. Establish the formula

$$\tan^{-1} x + \tan^{-1} y = \tan^{-1} \frac{x+y}{1-xy}$$

and simplify this when $xy = 1$.

4. Find the radii of the escribed circles of a triangle in terms of its sides.

The sides of a triangle are 6 ft., 8 ft., and 5 ft., respectively. Prove that two of the escribed circles are equal.

5. Prove De Moivre's formula

$$\cos n\theta + i \sin n\theta = (\cos \theta + i \sin \theta)^n$$

when n is a positive integer. Consider in particular, the case when $n=2$, and hence verify the identities

$$\cos 2\theta = \cos^2 \theta - \sin^2 \theta$$

$$\sin 2\theta = 2 \sin \theta \cos \theta.$$

6. Show that $\sin x = x - \frac{x^3}{6} + \frac{x^5}{120} - \dots$, where x is the circular measure of an angle.

Write down the series for $\sin 11^\circ 15'$.

7. Prove that $\sin x = \frac{e^{ix} - e^{-ix}}{2i}$, where $i^2 = -1$. What form does this relation assume when x is a multiple of two right angles?

8. Calculate the distance between two points whose Cartesian co-ordinates are (x_1, y_1) and (x_2, y_2) .

Can you find a point equidistant from the four points $(a \cos \alpha, a \sin \alpha)$, $(a \cos \beta, a \sin \beta)$, $(a \cos \gamma, a \sin \gamma)$, and $(a \cos \delta, a \sin \delta)$?

9. Determine the condition that the two straight lines $y = m_1x + c_1$ and $y = m_2x + c_2$ may be parallel.

If $y = \tan ax$ and $y = x$ are parallel lines, prove that

$$a = (4n+1) \frac{\pi}{4}, \text{ where } n \text{ is an integer, positive or negative.}$$

10. Plot the positions of the points

$$(a, a), (-a, a), (-a, -a), (a, -a),$$

and show that they form a square circumscribed about the circle $x^2 + y^2 = a^2$.

11. Find the centre and radius of the circle.

$$x^2 + y^2 + 2gx + 2fy + c = 0.$$

and also the area of an equilateral triangle inscribed in it.

12. Express the general equation of a tangent to the parabola $y^2 = 4ax$ in the form $y = mx + \frac{a}{m}$ and derive the equations of the two tangents which are equally inclined to the co-ordinate axes.

13. If ϕ denote the eccentric angle of a point on the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, show that the co-ordinates of the point may be written $(a \cos \phi, b \sin \phi)$.

The distance of a point on the conic $\frac{x^2}{6} - \frac{y^2}{2} = 1$ from the centre is 2. Find the eccentric angle.

14. Write a short note on the hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$

explaining clearly how it consists of two distinct infinite branches. Prove that the above hyperbola represents the locus of the variable point $(a \sec \theta, b \tan \theta)$, where θ is a parameter.

MATHEMATICS—PASS

Second Paper

Attempt only ten questions.

1. Find, from first principles, the differential co-efficient of $\cos x$.
If $\cos y = \frac{b+a \cos x}{a+b \cos x}$, find $\frac{dy}{dx}$

2. If $y = x^4 \log x$, prove that

$$\frac{d^6 p}{dx^6} + \frac{24}{x^2} = 0.$$

3. Enunciate Taylor's Theorem.

Find the first three terms in the expansion of $\tan x$ in ascending power of x .

4. Divide the number 8 into two such parts that (1) the sum of the squares of the two parts may be a minimum, and (2) the product of the two parts may be a maximum.

5. Prove that the subtangent is of constant length in the curve.
 $\log y = x \log a.$

6. Prove that the polar subnormal is constant in the curve.
 $r = a\theta.$

7. Find the radius of curvature at any point on the parabola.
 $x^2 = 4my.$

8. Perform the integrations :—

$$(1) \int \frac{a+x}{a-x} dx; \quad (2) \int \frac{dx}{x^2 - x - 6}$$

9. Perform the integrations :—

$$(1) \int e^x z^2 dz; \quad (2) \int \frac{x dx}{x^2 + 2x - 3}$$

10. Prove that

$$\int_a^\beta \frac{1}{\sqrt{(x-a)(\beta-x)}} = -\frac{\pi}{8}(\beta-a)^2$$

Or,

$$\int_0^1 e^{mx} \sin mx dx = \frac{m}{a^2 + m^2}.$$

11. Calculate the area of the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

12. Find the length of the logarithmic curve

$$y = ca^x.$$

13. Define the intrinsic equation of a curve and obtain it for the cardioid $r = a(1 - \cos \theta)$.

14. Solve $\frac{dy}{dx} + \frac{y}{x} = x^2$,

15. Solve $2x \frac{dy}{dx} + \left(\frac{dx}{dy}\right)^2 = 0$.

MATHEMATICS—PASS

Third Paper

Only Nine questions to be attempted, but not more than six from any one group.

A.

1. Establish the formula $W = Vsw$, explaining the notation.

Show how to find the specific gravity of a mixture of given weights of different substances whose specific gravities are given.

2. Describe Brahmah's press, and state the hydrostatic principle it exemplifies.

3. If two liquids which do not mix together meet in a bent tube the heights of their upper surfaces above their common surfaces will be inversely proportional to their densities. Prove this.

Is the bent tube required to be of uniform bore?

4. An equilateral triangle is vertically immersed in water with one side in the surface, which is exposed to atmospheric pressure. Find the resultant pressure on the triangle, given that the length of a side is 3 feet, the pressure of the atmosphere is 15 pound-weight to the square inch, and the mass of 1 cubic foot of water is 62.5 pounds.

5. Define Centre of pressure.

A rectangle is immersed vertically in a heavy homogeneous liquid with two of its sides horizontal and at depths a and b below the surface. Find the depth of the centre of pressure.

6. Find the conditions of equilibrium of a heavy body freely floating in a liquid.

An elastic bladder containing air just floats at the surface of the sea. What will happen if it be plunged to a great depth in the sea and then released?

7. What is meant by the height of the homogeneous atmosphere?

Calculate this height, given that specific gravity of air is 0.0013, the specific gravity of mercury is 13.596, the height of the mercury barometer is 30 inches, and the weight of a cubic foot of water (the standard substance) is that of 62.5 pounds.

8. A wine glass, in the shape of a hollow right circular cone, 4 feet in height, is lowered mouth downwards into water till the level of the water inside is 3.4 feet below the surface. What is the height of the part of the cone now occupied by air, the height of the water barometer being 3.4 feet?

9. Describe the common hydrometer, and show how it is graduated.

10. A uniform rod is suspended by two vertical strings attached to its extremities, and half of it, from one extremity is immersed in water. If its specific gravity be s , find the ratio between the tensions of the strings.

B.

11. Define 'right ascension,' 'declination,' 'altitude,' 'azimuth,' and 'hour angle.' State how they are measured on the celestial sphere.

Prove that the altitude of the celestial pole at any place is equal to the latitude of the place.

12. Describe the transit circle, and show how to find the zenith point.

13. What is meant by 'coefficient' of atmospheric refraction? Give Bradley's method of determining it.

14. How is the annual apparent path of the Sun, as observed from the Earth, traced on the celestial sphere?

From what observations is it established that the apparent path of the Sun round the Earth is not circular?

15. Explain graphically what, in the case of a planet, is meant by superior conjunction, 'inferior conjunction,' 'opposition' 'nodes,' and 'elongation.'

What are the limits respectively for the elongation of a superior and an inferior planet?

What are conditions for the transit of an inferior planet across the Sun's disc?

16. State Kepler's Third Law, and deduce it from the law of gravitation.

17. What is meant by the 'geocentric parallax' of a heavenly body?

Given that the Sun's horizontal parallax is $8'8''$ find the Sun's distance from the Earth, the radius of which is 3,960 miles approximately.

18. Give Flamsteed's method of finding the right ascension of a star, and explain its advantages.

19. Define the Moon's 'synodic,' and 'sidereal' periods, and find the sidereal period, given that the synodic period consists of $29\frac{1}{2}$ days.

20. Given the sidereal time at any instant at Greenwich, establish the formula giving the mean time at that instant.

What do you understand by 'mean Sun'?

1919

MATHEMATICS—PASS

First Paper

Answer any ten questions.

1. Calculate, from first principles, all the trigonometrical ratios of an angle of 60° , and find all the angles between 0° and 500° which satisfy the equation $\sin^2 \theta = \frac{1}{2}$.

2. Express in $2x$ and $\cos 2x$ in terms of $\tan x$; and simplify the expression.

$$\tan^{-1} + \cot^{-1} + \left(\frac{1 - \tan^2 x}{1 + \tan^2 x} \right)^2 + \left(\frac{2 \tan x}{1 + \tan^2 x} \right)^2$$

3. Establish the formula

$\tan(A+B+C)$

$$= \frac{\tan A + \tan B + \tan C - \tan A \tan B \tan C}{1 - \tan B \tan C - \tan C \tan A - \tan A \tan B}$$

and deduce the relation.

$$\tan A + \tan B + \tan C = \tan A \tan B \tan C,$$

when A, B, C are the angles of a triangle.

4. Obtain Gregory's formula

$$\tan^{-1} x = x - \frac{x^3}{3} + \frac{x^5}{5} - \dots$$

when x lies between 1 and -1 .

5. Deduce the identity

$$\sin \theta - \frac{\sin^3 \theta}{3} + \frac{\sin^5 \theta}{5} - \dots = \sec^{-1} (\sqrt{1 + \sin^2 \theta})$$

In any triangle, prove that

$$\tan \frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{s(s-a)}}$$

Find the tangents of the angles of a triangle whose sides are 10ft. 35ft., and 39ft.

6. Express
- e^{ix}
- in the form
- $\cos x + i \sin x$
- ; and verify that the quantity
- e^{ix}
- will vanish, provided
- $\tan x = i$
- .

7. Prove that
- $\cos x = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \dots$
- and expand
- $(\cos x + 30^\circ)$
- in ascending powers of
- x
- .

8. Determine the distance between two points whose Cartesian co-ordinates are given.

Find, in its simplest form, the distance between the points (x_1, y_1) (x_2, y_2) given by

$$x_1 = y_1 = \sin a + \sin(a + \beta) + \sin(a + 2\beta) + \dots \text{to } n \text{ terms};$$

$$x_2 = y_2 = \cos a + \cos(a + \beta) + \cos(a + 2\beta) + \dots \text{to } n \text{ terms}.$$

9. Find the condition that the lines
- $y = m_1 x$
- and
- $y = m_2 x$
- may be at right angles to each other.

$$\text{If } y = \frac{1 + \tan a}{1 - \tan x}$$

$$\text{and } y = \frac{1 + \tan \beta}{1 - \tan \beta} x$$

be perpendicular lines, prove that $a - \beta$ is an odd multiple of $\frac{\pi}{2}$.

10. Find the mean position of the set of points.

$$(x_1, y_1) (x_2, y_2) \dots (x_n, y_n),$$

Prove that the centre of the circle

$$x^2 + y^2 - 6x + 6y + 14 = 0$$

is the centre of mean position of the centres of the circles

$$x^2 + y^2 - 2x + 2y - 140 = 0$$

$$x^2 + y^2 - 4x + 4y - 1 = 0.$$

$$x^2 + y^2 - 12x + 12y + 47 = 0.$$

11. Prove that the general equation of a tangent to the circle $x^2 + y^2 = a^2$ may be written.

$$y = mx + a \sqrt{1 + m^2}.$$

If $y = x \sin a + a \sec a$ be a tangent, then $\cos^2 a = 1$.

12. Show that the equation of every parabola can be put in the form $(y + k)^2 = 4a(x + h)$ the axes being suitably chosen. Find the vertex, focus, and latus rectum of the parabola $y^2 = 8y - 4x$.

13. Express the polar of a point (x_1, y_1) with regard to the conic $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ in the form $\frac{xx_1}{a^2} + \frac{yy_1}{b^2} = 1$.

Find the locus of the point, if the polar touches the director circle $x^2 + y^2 = a^2 + b^2$.

14. If BP and CD be a pair of conjugate semi-diameters of an ellipse, whose semi-axes are a, b , prove that.

$$CP^2 + CD^2 = a^2 + b^2$$

If $CP = a \sin \phi + b \cos \phi$, find CD .

MATHEMATICS—PASS

Second Paper

Candidates are permitted to attempt ten questions only.

1. Find, from first principles, the differential co-efficient of $\tan x$.

Calculate the value of $\frac{dy}{dx}$ when $y \sec x = 1 - \tan x$.

2. If $y = \cos(a \sin^{-1} x)$, prove that

$$(1 - x^2) \frac{d^2 y}{dx^2} - x \frac{dy}{dx} + a^2 y = 0.$$

3. Expand $\cos^3 x$ in powers of x .

4. Calculate the value of

$$(\sin x) \tan x$$

when $x = \frac{\pi}{2}$.

5. Prove that $\frac{x^2 - 7x + 6}{x - 10}$

is a maximum when $x = 4$, and a minimum when $x = 16$.

6. Find that curve of the class

$$a^{n-1}y = x^n$$

whose subnormal is constant.

7. In the equiangular spiral

$$r = ac^{\theta \cot a}$$

that $\frac{dr}{ds} = \cos a$, and $p = r \sin a$.

8. Prove that in the cardioid
- $r = a(1 + \cos \theta)$

$$p \propto (\sqrt{r})^3$$

9. Perform the integrations

$$\int \sqrt{x^2 - a^2} \, dx, \int \cos x \cdot dx.$$

10. Perform the integrations

$$\int e^{ax} \sin bx \, dx, \int \frac{x dx}{x^2 - 12x + 35}.$$

11. Calculate the area bounded by a parabola and its latus rectum.

12. Calculate the length of the evolute of the ellipse.

13. Integrate
- $y = x \frac{dy}{dx} + \left(\frac{dy}{dx} \right)^3$
- .

14. Integrate
- $\frac{dy}{dx} = \frac{x + 2y \times 3}{2x + y - 3}$
- .

15. Prove that all curves for which the square of the normal is equal to the square of the radius vector are either circles or rectangular hyperbolas.

MATHEMATICS—PASS

Third Paper

Five questions to be attempted from each of the groups.

A

1. Distinguish between *Whole Pressure* and *Resultant Pressure*, and prove that the whole pressure of a liquid on a surface is equal to the weight of a column of a liquid of which the base is equal to the area of the surface and the height equal to the depth of the centroid below the surface of the liquid.

2. Find the centre of pressure of a triangle whose base is in the surface of a homogeneous heavy liquid (*i*) when the surface is not exposed to pressure, and (*ii*) when it is exposed to uniform pressure.

3. Find the conditions of equilibrium of a heavy body floating freely in a liquid.

A vessel is quite full of water, and a piece of wood is put to float on the water. Does this alter the pressure on the bottom? Give reasons for your answer supposing that the vessel had not been overflowing.

4. Explain a method of determining the specific gravity of a liquid.

A given body weights four times as much in air as in water, and one-third as much again in water as in another liquid. Find the specific gravity of the latter liquid.

5. Define *Metacentre* and *Curve of buoyancy*.

A triangular lamina is floating with its plane vertical and vertex downwards. Prove that the curve of buoyancy is a hyperbola.

6. State Boyle's Law connecting the pressure and volume of a gas at a constant temperature, and show how it can be experimentally verified.

A bubble of air whose volume is .0021 cub. in. is formed at the bottom of a pond; on reaching the surface its volume becomes .004 cub. in. What is the depth of the pond, the height of the water barometer being 34 ft.?

7. Prove that if a series of heights be taken in arithmetic progression, the densities of the air will decrease in geometric progression.

8. Describe Smeaton's air-pump.

If the receiver be six times as large as the barrel, find how many strokes must be completed before the density of the air is less than half of the original density.

B

9. Define *Latitude*, *Longitude*, *Right Ascension*, and *Declination* of a heavenly body, and exhibit them on the celestial sphere.

What point in the heavens has its latitude, longitude, right ascension and declination zero?

10. Prove that the altitude of the celestial pole at any place is equal to the latitude of the place.

A circumpolar star crosses meridian at altitudes $10^{\circ}11' 17''$ and $72^{\circ} 15' 31''$; find the latitude of the place and the star's polar distance.

11. Describe fully a transit instrument.

How is the rate of error of the astronomical clock in an observatory exactly determined?

12. What is the cause of twilight?

Determine the limits of the latitudes of places at which twilight lasts all night long when the sun's declination is $10^{\circ}11' N$.

13. Explain by a diagram the phases of the moon.

• Prove that the ratio of the illuminated part of the moon's disk to the whole disk $(1 - \cos \theta) : 2$, where θ is the angle subtended at the moon by the arc joining the sun to the earth.

14. Show that the effect of aberration is to make the stars, when referred to the celestial sphere, describe small ellipses about their true places.

Prove further that the aberration varies as a sine of the earth's way.

15. What are the condition for a lunar eclipse? Is it possible to see the moon eclipsed when the sun still appears shining in the heavens? If so to what cause is this phenomenon due?

16. What is the *equation of time*? Explain its principal causes.

The times of the sun's rising and setting on November 1 are 6 hrs. 56 min. and 4 hrs. 32 min. respectively; find approximately the equation of time for that day.

1920

MATHEMATICS—PASS

First Paper

Only eight questions are to be attempted.

1. In a plane triangle prove that

$$\text{area } \frac{1}{2}bc \sin A = \frac{abc}{4R}.$$

Deduce that

$$4 \cos \frac{A}{2} \cos \frac{B}{2} \cos \frac{C}{2} = \frac{S}{R}.$$

2. Find $\sin 18^\circ$ and the general solution of
 $4 \sin \theta + 1 = \sqrt{5}$.

Prove that

$$\sin^{-1} \frac{4}{5} + \sin^{-1} \frac{5}{13} + \sin^{-1} \frac{16}{65} = \frac{\pi}{2}.$$

3. If $\sin x + \sin^2 x = 1$, find $\sin x$; and show that
 $\cos^2 x + \cos^4 x = 1$.

4. Find the condition necessary so that the same value of θ may satisfy both the equations.

$$a \sec^2 \theta - b \cos \theta = 2a,$$

$$b \cos^2 \theta - a \sec \theta = 2b.$$

5. State and prove De Moivre's theorem

6. Expand $\sin \theta$ in ascending powers of θ .

Given $\frac{\sin \theta}{\theta} = \frac{2105}{2106}$, show that θ is nearly the circular measure of 3° .

7. Find the sum of n terms of series

$$\cos a + \cos (a + \beta) + \cos (a + 2\beta) + \dots$$

Deduce the value of the expression

$$\cos a - \cos (a + \beta) + \cos (a + 2\beta) - \dots + (-1)^{n-1} \cos \{a + (n-1)\beta\}.$$

8. Reduce $(a + i\beta)^{x+i\beta}$ to the form $A + iB$.

9. Find the co-ordinates of the point which divides the distance between two given points in the ratio $m_1 : m_2$.

Prove that the three medians of a triangle meet in a point.

10. Show that the equation

$$(a + ka')x + (b + kb')y + (c + kc') = 0$$

always represents a straight line passing through one fixed point, whatever be the value of k .

The line $\frac{x}{a} + \frac{y}{b} = 1$ moves so that $\frac{1}{ab} = \lambda$ (a constant)

Show that the line always passes through the fixed point

$$\left(\frac{1}{\lambda}, \frac{1}{\lambda} \right).$$

11. Show that the lines $Ax^2 + 5Hxy + By^2 = 0$ are perpendicular to the lines $Bx^2 - 3Hxy + Ay^2 = 0$.

12. Find the conditions that the general equation of the second degree may represent a circle.

Prove the centre of the three circles :

$$x^2 + y^2 = 1$$

$$x^2 + y^2 + 6x - 2y = 1$$

$$x^2 + y^2 - 12x + 4y = 1$$

lie on one straight line.

13. Show that the two circles

$$x^2 + y^2 + 2gx + 2fy + c = 0,$$

$$\text{and } x^2 + y^2 + 2g'x + 2f'y + c' = 0$$

will cut orthogonally, if $2gg' + 2ff' - c - c' = 0$.

Prove that the focus of the centre of a circle which cuts two fixed circles orthogonally is their radical axis.

14. Obtain the Cartesian equation of a parabola, having given the focus and the directrix ; and show that the latus rectum is a third proportional to any abscissa and its corresponding ordinate.

A circle and a parabola intersect in four points. Prove that the algebraic sum of the ordinates of the four points is zero.

15. Show that the line $y = mx + \sqrt{a^2 m^2 + b^2}$ always touches the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.

An ellipse slides between two rectangular axes. Prove that the locus of its centre is a circle.

16. Define a hyperbola conjugate to a given hyperbola.

Prove that the chords of a hyperbola which touch the conjugate hyperbola are bisected at their points of contact.

MATHEMATICS—PASS

Second Paper

Candidates are permitted to attempt ten questions only.

1. Differentiate :—

$$(1) \quad y = \frac{x}{\sqrt{1+x^2}}.$$

$$(2) \quad y = \tan^{-1}x + \tan^{-1}\frac{1}{x}.$$

2. The base angles of a plane triangle are small quantities of the first order ; find the order of the difference between the base and the sum of the sides.

3. If the area of a circle increases at a uniform rate, the rate of increase of this perimeter varies inversely as the radius.

4. Calculate the value of.

$$\frac{\sqrt{3x} - \sqrt{12-x}}{2x-3\sqrt{19-5x}}$$

when $x=3$

5. Prove that

$$\log x \cot x = -\frac{x^2}{3} - \frac{7}{90}x^4 \dots$$

6. Find the maximum and minimum values of

$$y = (x-1)(x-2)^2.$$

7. Prove that the square of the subtangent varies as the subnormal in the curve.

$$by^2 = (x+a)^3.$$

8. Find the pedal of the circle

$$r^2 = ap.$$

9. Prove that the radii of curvature of the curve

$$y^2 = \frac{a+x}{a-x}$$

at the origin $\pm \sqrt{2}.a$.

10. Prove by summation that

$$\int_a^b e^{-x} dx = e^{-a} - e^{-b}.$$

11. Integrate :

$$(i) \int \frac{dx}{x^2-3}; \quad (ii) \int e^x x^2 dx.$$

12. Integrate :

$$(i) \int \cos^3 x dx; \quad (ii) \int \frac{dx}{\cos a + \cos x}$$

13. Form the intrinsic equation of the cardioid

$$r = a(1 - \cos \theta).$$

14. Calculate the area of a loop of the curve

$$r = a \sin 3\theta.$$

15. Integrate :

$$\frac{dy}{dx} + xy = x, \quad \text{or,} \quad \frac{dy}{dx} + \frac{y}{x} = x.$$

16. Integrate :

$$\frac{dy}{dx} = y + \frac{1}{y}, \quad \text{or,} \quad y = x \frac{dy}{dx} + \left(\frac{dy}{dx} \right)^2.$$

MATHEMATICS—PASS

Third Paper

Answer only ten questions.

1. Establish the formula
- $p = gpz$
- .

p_1, p_2, p_3 , are respectively the pressures of a liquid at depths z_1, z_2, z_3 . Prove that $p_1 = p_2 = p_3$, provided z_1, z_2, z_3 satisfy the relation.....

$$z_1^2 + z_2^2 + z_3^2 = z_2 z_3 + z_3 z_1 + z_1 z_2.$$

Show that the *whole pressure* on a plane lamina immersed in a liquid = (area of the lamina) \times (pressure at the C. G.)

2. A circular disc of radius 28 cm. is placed in a liquid, with its centre at a depth of 15 metres below the free surface. Find the whole pressure on a lamina in dynes. (Neglect the atmospheric pressure.)

3. Obtain the conditions of equilibrium of a body floating freely in a liquid.

A solid of volume V is allowed to float successively in several liquids. If the portions immersed in the different cases be respectively $V, \frac{1}{2}V, \frac{1}{3}V, \frac{1}{4}V$verify that the specific gravities of the liquids are in the ratio

$$1 : 2 : 3 : 4 : \dots$$

4. Describe the common hydrometer, and show how to graduate it.

5. How does a barometer measure the atmospheric pressure?

Barometers are constructed with liquids of different densities p_1, p_2, p_3If their respective heights be h_1, h_2, h_3establish the equalities

$$h_1 p_1 = h_2 p_2 = h_3 p_3 = \dots$$

6. Explain the construction and use of any form of air-pump.

7. Define the *centre of pressure* of a plane lamina immersed in a liquid, and prove that it coincides with the C. G. when the lamina occupies a horizontal position.

A triangular lamina is held in a horizontal position inside a liquid. Show that the CP lies on each of the three medians.

8. Define the *right ascension* and *declination* of a star, and show that the equator represents the locus of all points whose declination is zero. Can you construct the locus of all points whose declination is 45° ?

9. Establish the following statements :—

(1) The latitude of a place = the altitude of the celestial pole at that place.

(2) The colatitude of a place = the zenith distance of the celestial pole.

19. Prove that the refraction of a heavenly body varies as the tangent of the apparent zenith distance.

The apparent zenith distance z of a star is given by

$$5 \sin^2 z + 7 \sin z - 6 = 0.$$

Calculate the true zenith distance, taking the coefficient of refraction as $58''$.

11. Enumerate Kepler's law of planetary motion.

The mean distance of two planets from the sun are in the ratio 844 : 1899, Prove that the periodic time of one of the planets is $\frac{8}{17}$ of that of the other.

12. What do you mean by the *precession of the equinoxes*? What is its effect on the latitude of a star?

The present latitude of a star is 52°N . What would be the latitude after a lapse of 30 years?

13. Explain briefly the phenomena of solar eclipses.

14. How would you compare the local times at two or more places whose longitudes are known?

A, B, C,...are certain places on the surface of the earth. At one and the same instant the clocks at the several places indicate respectively 1 A. M., 2 A. M., 3 A. M., &c. Prove that longitudes of A, B, C,...are in arithmetical progression.

1921

MATHEMATICS—PASS

First Paper

Only six questions to be attempted.

1. If r and R respectively be the radii of the inscribed and the circumscribed circles of a plane triangle, establish the relation

$$r = 4R \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}$$

2. Prove that $\cos 15^\circ = \frac{\sqrt{3}+1}{2\sqrt{2}}$, and find all the angles between 0° and 2π which satisfy the equation

$$4 \cos^2 \theta - 2\sqrt{2} \cos \theta = 1.$$

3. Prove that

$$\tan^{-1}1 + \tan^{-1}2 + \tan^{-1}3 = \pi = 2(\tan^{-1}1 + \tan^{-1}\frac{1}{2} + \tan^{-1}\frac{1}{3}).$$

4. Solve the equation $2 \sin^2 x + \sin^2 2x = 2$, and examine the root or roots which satisfy the equation

$$\sin 2x + \cos 2x = \tan x.$$

5. Show that $\cos \frac{\theta}{n} + \sqrt{-1} \sin \frac{\theta}{n}$ is one of the n^{th} roots of $\cos \theta + \sqrt{-1} \sin \theta$.

Find all the values of $\{1 + \sqrt{-1}\}^{\frac{1}{3}}$.

6. Establish the series of Gregory :

$$\theta = \tan \theta - \frac{1}{3} \tan^3 \theta + \frac{1}{5} \tan^5 \theta - \dots \text{etc.}$$

Hence, or otherwise, express $\tan^{-1}x$ in a series of ascending powers of x , when x lies between -1 and $+1$.

7. Find the sum of the sines of a series of n angles which are in arithmetical progression.

Deduce the sum of the series

$$1 + 2 + 3 \dots + (n-1).$$

8. Prove that $\sin x = \frac{e^{ix} - e^{-ix}}{2i}$, where $i^2 = -1$.

What form does this relation assume when x is a multiple of two right angles ?

9. Find an expression for the area of a triangle in terms of co-ordinates of its vertices.

Can you use this to obtain the condition that three points in a plane may be collinear?

10. Calculate the length of the perpendicular drawn from any point (x_1, y_1) to the straight line $px + qy = r$.

How far is the line $h(x + h) + k(y + k) = 0$ from the origin?

11. Find the condition that the two lines

$$y = m_1x + c_1,$$

$$y = m_2x + c_2$$

may be at right angles.

Show that the lines $6x - 4y = 0$ and $2x - 3y = 1$ are perpendicular to each other.

12. Show that every equation of the form

$$x^2 + y^2 + 2gx + 2fy + c = 0$$

always represents a circle in a rectangular co-ordinates. Find its centre and radius.

13. Define the *radical axis* of two circles, and show that it is perpendicular to the line joining their centres.

14. Obtain the equation of the tangent at any point $(at^2, 2at)$ of the parabola $y^2 = 4ax$.

Show that the line $y = m(x + a) + \frac{a}{m}$ touches the parabola

$$y^2 = 4a(x + a).$$

15. If ϕ denotes the eccentric angle of a point on the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ show that the co-ordinates of the point may be written as

$$(a \cos \phi, b \sin \phi).$$

Find the eccentric angle of a point on the ellipse $\frac{x^2}{9} + \frac{y^2}{4} = 1$ at a distance 3 from the centre.

16. Establish the equation of a hyperbola in the standard form $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$, and show that the line $y = mx + \frac{b^2}{m}$ will touch it if $p^2 = m^2(a^2m^2 - b^2)$.

MATHEMATICS—PASS

Second Paper

Candidates are permitted to attempt ten questions only.

1. Find, from first principles, the differential co-efficients of $\frac{1}{x}$ and $\sin x$.

2. $y = \log (\sin x)$, prove that $\frac{d^3 y}{dx^3} = \frac{2 \cos x}{\sin^3 x}$.

3. From Maclaurin's Theorem or otherwise, prove that

$$\tan^{-1} x = x - \frac{x^3}{3} + \frac{x^5}{5} - \&c.$$

4. A line AB is drawn to form with two fixed lines a triangle of constant area. Show that the limiting position of the intersection of two consecutive positions of AB bisects AB .

5. Find the value of

$$\frac{x - \sin x}{x^3}$$

when $x = 0$.

6. If $u = xy\phi\left(\frac{y}{x}\right)$, prove that $x \frac{du}{dx} + y \frac{du}{dy} = 2u$.

7. Divide a number into two parts such that their product shall be a maximum.

8. Prove that in the parabola $y^2 = 2mx$, the subnormal is equal to m .

9. Prove that the pedal of the circle $r^2 = 2ap$ is the cardioid $r^3 = 2ap^2$.

10. In a plane curve, prove that

$$r^2 = p^2 + \left(\frac{dp}{dw}\right)^2.$$

11. Prove the formula for the radius of curvature

$$p = r \frac{dr}{dp},$$

and apply it to find the radius of curvature at any point on a parabola.

12. Prove, from first principles, that

$$\int_a^b \frac{dx}{x^2} = \frac{1}{a} - \frac{1}{b}.$$

13. Integrate :

(1) $\int \operatorname{cosec} x \, dx ;$

(2) $\int \frac{dx}{x^2 - a^2}.$

14. Integrate :

$$\int \sqrt{a^2 - x^2} \, dx$$

by the rule of integration by parts or otherwise.

15. Prove that the perimeter of the cardioide

$$r = a(1 - \cos \theta) \text{ is } 8a.$$

16. Find the area above the x axis included between the circle $x^2 + y^2 = 2ax$ and the parabola $y^2 = ax$.

17. Integrate :

$$y \frac{dy}{dx} = x \left(\frac{dy}{dx} \right)^2 + a$$

and obtain the singular solution.

18. Integrate :

$$\frac{dy}{dx} + \frac{y}{x} = y^2.$$

MATHEMATICS—PASS

Third Paper

Answer only six questions.

1. Define a fluid.

Prove that the pressure at any point of a fluid is the same in every direction.

2. The whole pressure of a liquid on a surface is equal to the weight of a column of liquid of which the base is equal to the area of the surface, and the height is equal to the depth of its centroid below the surface of the liquid.

A circular cylinder of height h and radius r , closed at both ends, is just filled with liquid, and its axis is inclined at 45° to the vertical. Find the whole pressure on the curved surface.

3. Find the resultant horizontal pressure in a given direction of a liquid on a given surface.

A hollow circular cone filled with water is held with its vertex downwards and axis vertical; determine the resultant horizontal pressure on either of the curved portions into which it is divided by a vertical plane through its axis.

4. Obtain the conditions of equilibrium of a body floating freely in a liquid.

A sphere of ice floats in water and gradually melts, retaining its spherical shape. Does its centre rise or sink?

5. Describe Nicholson's hydrometer.

A Nicholson's hydrometer, of weight 8 tolas, requires weights of 2 tolas and 5 tolas respectively in the upper pan to sink it to the fixed mark in two different liquids. Compare the specific gravities of the two liquids.

6. Describe a barometer. How is it graduated?

7. Explain the construction and use of a forcing pump.

How can a continuous flow be obtained?

8. Define *right ascension*, *declination*, *longitude*, and *latitude* of a star.

Find the *right ascension*, *declination*, *latitude*, and *longitude* of the pole of the equator and of the pole of the ecliptic.

9. Prove that the meridian altitude is equal to the sum or difference of colatitude and declination.

What is the meridian altitude of the sun at Calcutta during the summer solstice, the latitude of Calcutta being $22^{\circ}34'$?

10. Prove that the refraction of a heavenly body varies as the tangent of the apparent zenith distance.

The apparent altitude of a star is 30° ; calculate the true altitude, the co-efficient of refraction being $58''\cdot2$.

11. Find the duration of twilight at the equator during the equinoxes.

Find the lowest latitude at which it is possible for twilight to last all night.

12. Deduce from the Law of Gravitation that the squares of the periodic times of the planets are to one another as the cubes of their mean distance from the sun.

13. Define *horizontal parallax*. Explain the effect of parallax on a heavenly body.

The moon's horizontal parallax being $57' 6''$, find its true altitude corresponding to an observed altitude of 60° .

14. Explain briefly the phenomena of lunar eclipses.

15. Mars revolves on its axis in 24 hrs. 37 min., and round the sun in 686 days; find by how much the mean solar day on Mars exceeds that of the sidereal day.

The longitude of Ujjain is $75^\circ 45'$ and that of Calcutta is $88^\circ 32'$; find the time at Ujjain when it is 6 a. m. in Calcutta.

1922

MATHEMATICS—PASS

First Paper

Six questions to be attempted.

1. Prove that $\sin 18^\circ = \frac{\sqrt{5}-1}{4}$, and find all the angles between 0 and 2π which satisfy the equation

$$\cos 2\theta - \cos \theta + \frac{1}{2} = 0.$$

2. Prove that :

$$(1) \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R;$$

$$(2) S = 2R^2 \sin A \sin B \sin C.$$

S being the area and R the radius of the circumcircle of the triangle ABC .

3. Prove that

$$\begin{aligned} \tan^{-1}\frac{1}{3} + \tan^{-1}\frac{1}{5} + \tan^{-1}\frac{1}{7} + \tan^{-1}\frac{1}{8} \\ = 2 \tan^{-1}\frac{1}{5} + \tan^{-1}\frac{1}{7} + \tan^{-1}\frac{1}{8} = \frac{\pi}{4}. \end{aligned}$$

4. Find the sum of n terms of the series

$$\cos a + \cos 2a + \cos 3a + \dots$$

Obtain the sum to n terms of the series

$$\cos^3 a - \cos^3 2a + \cos^3 3a + \dots$$

5. Show that :

$$(1) \cos a - 1 + \frac{a^2}{2!} + \frac{a^4}{4!} - \dots;$$

$$(2) \sin a = a - \frac{a^3}{3!} + \frac{a^5}{5!} - \dots;$$

6. State and prove De Moivre's Theorem.

7. How would you define $\cos x$ and $\sin x$ when x is a complex quantity?

From your definitions prove that:

$$(1) \cos 2x = 1 - 2 \sin^2 x$$

$$(2) \sin 3x = 3 \sin x - 4 \sin^3 x.$$

8. Find the length of the perpendicular from the point (x_1, y_1) to the straight line $Ax + By + C = 0$.

If p and p' be the perpendiculars from the origin upon the straight lines whose equations are

$$x \sin \theta + y \cos \theta = \frac{a}{2} \sin 2\theta$$

and

$$x \cos \theta - y \sin \theta = a \cos 2\theta,$$

prove that

$$4p^2 + p'^2 = a^2.$$

9. Determine the equation of a pair of straight lines joining the origin with the points of intersection of the circle $x^2 + y^2 - 2x - 2y + 1 = 0$ and the line $x + y = \lambda$. Hence determine the condition that $x + y = \lambda$ may touch the circle.

10. If by any change of axes without change of origin, the quantity

$$ax^2 + 2xy + by^2$$

becomes

$$a'x'^2 + 2h'x'y' + b'y'^2,$$

the axes in each case being rectangular, prove that

$$a - b = a' - b' \text{ and } ab - h^2 = a'b' - h'^2.$$

11. Show that the locus of a point, the sum of the squares of whose distances from three fixed points is constant, is a circle.

Find the co-ordinates of the centre of this circle.

12. Prove that the middle points of a system of parallel chords of a parabola all lie on a straight line which is parallel to the axis.

Hence show that the tangents at the ends of chord meet on the diameter which bisects the chord.

13. Find the condition that the line $y = mx + c$ touches the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

Two tangents to an ellipse are at right angles. Find the locus of their intersection.

14. Show that if a pair of diameters be conjugate with respect to a hyperbola they will be conjugate with respect to its conjugate hyperbola.

If e and e' be the eccentricities of a hyperbola and its conjugate, prove that

$$\frac{1}{e^2} + \frac{1}{e'^2} = 1.$$

MATHEMATICS—PASS

Second Paper

Candidates are permitted to attempt ten questions only.

1. Find the value of $\frac{\sin \theta}{\theta}$

when θ is regarded as infinitely small.

2. Prove that

$$(i) \frac{d}{dx}(\tan^{-1}x) = \frac{1}{1+x^2};$$

$$(ii) \frac{d}{dx}[\log \sin x] = \cot x.$$

3. Prove the expansion

$$e^x = 1 + \frac{x}{1} + \frac{x^2}{1.2} + \text{etc.}$$

4. Find the value of $\frac{x - \sin x}{x^3}$ when $x = 0$.

5. Prove that the maximum value of

$$a \sin x + b \cos x \text{ is } \sqrt{a^2 + b^2}.$$

6. Prove that the subnormal in the parabola $y^2 = 2mx$ is equal to m .

7. Prove the formula for the radius curvature in the form

$$\rho = r \frac{dr}{dp},$$

and obtain the length of the chord of curvature through the origin.

8. Calculate, from first principles,

$$\int_b^a e^x dx.$$

9. Evaluate :

$$\int \frac{dx}{\sqrt{x^2 + a^2}}, \quad \int \frac{\cos \sqrt{x}}{\sqrt{x}} dx.$$

10. Integrate

$$\int x^2 e^x dx \quad \int \frac{x dx}{x^2 + 2x + 1}$$

11. Integrate

$$\int \frac{dx}{5 + 4 \cos x}.$$

12. Find the perimeter of the cardioid

$$r = a(1 - \cos \theta).$$

13. Calculate the area of an arc bounded by a parabola and its latus rectum.

14. Integrate

$$\frac{dy}{dx} + \frac{y}{x} = x^2$$

15. Integrate

$$\frac{dy}{dx} + x \sin 2y = x^3 \cos^2 y.$$

16. Integrate

$$y = x \frac{dy}{dm} + \left(\frac{dy}{dx} \right).$$

MATHEMATICS—PASS

Third Paper

Attempt any five questions.

1. Define pressure at a point of a fluid at rest. Is pressure at a point of a fluid of the nature of a Force? Give reasons for your answer.

Prove that the pressure at a depth h of a liquid of density ρ , at rest under gravity, is $g\rho h$.

2. Distinguish between *whole pressure* and *resultant thrust* on a material surface immersed in a fluid at rest.

Determine the whole pressure and resultant thrust on a spherical ball of radius r wholly immersed in a liquid of density ρ , at rest under gravity, with its centre at depth h below the surface.

[Surface of a sphere = $4\pi r^2$, volume of a sphere = $\frac{4}{3}\pi r^3$.]

3. Define centre of a plane area immersed in a fluid at rest.

Find the centre of pressure of a triangular area vertically in a liquid at rest under gravity with one side on the surface.

If the triangle were immersed obliquely with one side on the surface, where would the centre of pressure be? Give reasons for your answer.

4. A substance whose density is ρ is weighed by means of weights the density of which is ρ ; if δ be the density of the air, find the true weight corresponding to any apparent weight.

Show that the true weight would be greater than the apparent weight if $\rho' > \rho$.

5. Describe the common Hydrometer, and explain the principle of its gradation.

When a common hydrometer floats in water $\frac{9}{10}$ ths of its volume is immersed, and when it floats in milk $\frac{8}{9}$ ths of its volume is immersed. What is the specific gravity of milk?

6. Describe the Mercurial Barometer. Explain what corrections are to be applied to the readings for

(1) capacity of the cistern, and

(2) temperature.

7. Define Meridian of a place, and show that when a star is on the meridian its altitude is greatest and half of its visible path is accomplished.

Explain how, when the sun is at a solstitial point, it seems for sometime to stand still.

8. Define Latitude of a place, and show that the latitude of a place is equal to the altitude of the celestial pole.

Describe a method by which the latitude of a place may be determined, based on celestial observations through an astronomical instrument.

9. Define (1) Collimation Error, (2) Level Error and (3) Deviation Error of a Transit Instrument, and explain how they can be eliminated.

10. State the Third Law of Kepler, and deduce from it the law of gravitation, assuming the orbits of the planets to be circular.

Show that the velocities of two planets round the sun are inversely as the square roots of their distances from the sun.

11. Describe and explain the effect of Astronomical Refraction on the position of a heavenly body.

Explain how the sun, when it appears to us to be about to set,

has really just set, and how it is possible to see the moon eclipsed when the sun still appears shining in the heavens.

12. Define Sideral and Synodic Periods of the moon's motion.

Explain how these periods can be accurately determined.

1923

MATHEMATICS—PASS

First Paper

Five questions to be attempted.

1. Given $\sin A$, find $\sin \frac{A}{2}$ and $\cos \frac{A}{2}$, and explain why there is an ambiguity in your formulæ.

Given $\sin 30^\circ$, obtain $\sin 15^\circ$ and $\cos 15^\circ$.

2. Prove that

$$\tan^{-1} \frac{1}{2} + \tan^{-1} \frac{1}{5} + \tan^{-1} \frac{1}{8} = \frac{\pi}{4} = \frac{1}{2} \left(\sin^{-1} \frac{1}{3} = \sin^{-1} \frac{1}{3\sqrt{11}} + \sin^{-1} \frac{3}{\sqrt{11}} \right).$$

3. Obtain the expression for the radius r of the inscribed circle in the form

$$r = 4 R \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}$$

where R is the circum-radius.

4. Prove that $(\cos \theta + i \sin \theta)^n = \cos n\theta + i \sin n\theta$, where n is any integer.

$$x + \frac{1}{x} = 2 \cos \theta, \text{ show that}$$

$$x^5 + \frac{1}{x^5} = 2 \cos 5\theta.$$

5. For all real values of θ establish

$$e^{i\theta} = \cos \theta + i \sin \theta.$$

and deduce that the circular functions are periodic.

6. Find the sum to n terms of the series

$$\sin \alpha + \sin (\alpha + \beta) + \sin (\alpha + 2\beta) + \dots$$

Obtain the sum of the series

$$\cos^2 a + \cos^2 3a + \cos^2 5a + \dots \text{to } n \text{ terms.}$$

7. Obtain the coordinates of the point of intersection of two given straight lines.

Find the distance of the point of intersection of

$$2x - 3y + 5 = 0 \text{ and } 3x + 4y = 0$$

from the origin.

8. Find the condition that

$$ax^2 + 2hx + by^2 + 2gy + c = 0$$

may represent two straight lines.

Prove that these two straight lines will be parallel if $h^2 = ab$.

9. Obtain the equation to the tangent at any point of the circle $x^2 + y^2 + 2gx + 2fy + c = 0$.

Find the equations to the tangents to the circle

$$x^2 + y^2 = 9$$

which are parallel to the line $3x + 4y = 0$

10. Show that the eccentric angles at the ends of a pair of conjugate diameters of an ellipse differ by a right angle.

Show also that the sum of the squares of two semi-conjugate diameters of an ellipse is constant.

11. Obtain the equation of the normal to the parabola $y^2 = 4ax$ at the point $(at^2, -2at)$

Find the point of the parabola at which the normal is inclined at 30° to the axis.

12. Find the asymptotes of the hyperbola.

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1.$$

Obtain the equation to a hyperbola referred to the asymptotes as axes.

MATHEMATICS—PASS

Second Paper

Only ten questions to be attempted.

1. Find, from the definition, the differential coefficient of

$$\frac{x^2}{a};$$

where a is constant.

2. If $y = \tan x$, prove that

$$\frac{d^2y}{dx^2} = 2y(1+y^2).$$

3. *Either*, Find the first three terms in the expansion of $\log \sec x$.

Or, Prove that

$$\tan^{-1}x = x - \frac{1}{3}x^3 + \frac{1}{5}x^5 - \text{etc.}$$

4. The base angles of a triangle are given to be small quantities of the first order; find the order of the difference between the base and the sum of the sides.

5. Prove that the subnormal is equal to

$$y \frac{dy}{dx}$$

Show that the product of the subtangent and subnormal is y^2 .

6. Prove the formula for radius of curvature

$$\rho = \frac{ds}{d\psi}.$$

7. Find the limit of $\frac{1 - \cos \theta}{\theta^2}$ when $\theta = 0$,

8. Show that the minimum value of $x^2 - 4x + 9$ is 5.

9. Calculate, from first principles, the value of

$$\int_a^b x^2 dx$$

10. Integrate, by the rule of integration by parts, or otherwise,

$$\int \sqrt{1-x^2} dx.$$

11. Integrate

$$\int \frac{x dx}{(x-a)(x-b)} \text{ or } \int \cos^2 x dx.$$

12. Find the perimeter of

$$r = a(1 - \cos \theta).$$

13. Calculate the area bounded by a parabola and its latus rectum.

14. Integrate.

$$\frac{dy}{dx} = \frac{1+x^2}{xy(1+y)}.$$

15. Integrate

$$\frac{dy}{dx} + \frac{y}{x} = x^2.$$

16. Integrate

$$\frac{dy}{dx} y = \left(\frac{dy}{dx}\right)^2 x + a.$$

MATHEMATICS—PASS**Third Paper.**

Any five questions carry full marks.

1. If A and B be any two points in a homogeneous fluid at rest under gravity and if the line AB lie entirely in the fluid, show that

- (1) Pressure at A is equal to the pressure at B, when A B is horizontal,
- (2) Difference of pressure at A and B is proportional to AB, when AB is vertical.

2. Show that resultant fluid thrust on a solid wholly or partly immersed in a liquid at rest under gravity, is equal to the weight of the liquid displaced by the solid and acts vertically upwards through the centre of gravity of the displaced liquid.

A vessel contains water. A piece of cork is floated upon it. Show that the pressure at each point of the containing vessel will be increased by constant amount.

3. Calculate the depth of centre of pressure of a rectangle placed vertically in a liquid with one side in the surface the atmospheric pressure on the surface being neglected.

Show how the position of the centre of pressure will be affected when the atmospheric pressure on the surface is taken into account.

4. Describe with a sketch the *diving bell* and explain its principles.

A small hole is made in the side of the diving bell. Will the water flow in or the air flow out? Give reasons for your answer.

5. State Boyle's Law and show how it can be experimentally verified.

A barometer with an imperfect vacuum stands at 29.8 and 29.4 inches when a correct barometer indicated 30.4 and 29.8 inches, respectively. When the false barometer stands at 29, what will be the reading of the correct one?

6. Show that the mean pressure on a plane area immersed wholly in a liquid at rest under gravity is the pressure at the centre of gravity of the area.

A rectangular area is immersed vertically in a liquid with one side in the surface, and is divided into two equal parts by a horizontal line. Compare the resultant fluid thrusts on the two parts.

7. What is a *circumpolar* star? Show that the altitude of a circumpolar star is greatest or least when the star is on the meridian.

Define *latitude* of a place and show how it can be determined from observations of the transit of a circumpolar star over the meridian.

8. Explain the effect of *aberration* on the position of a star.

Show that the effect of aberration on a star situated at the pole of the ecliptic is to cause it to describe a small circle round its true position in the course of a year.

9. State the three laws of planetary motion due to Kepler.

Explain why comets move with greater velocity when at perihelion than at other parts of their eccentric orbits, and why of two planets that nearer to the sun has the greater velocity.

10. Draw a sketch exhibiting the sun, moon, and the earth with its umbra and penumbra.

Find the length of the earth's shadow, having given—

Earth's radius = 4,000 miles.

Semidiameter of sun = $16''$

Sun's parallax = $3''$.

A radian = $206,265''$.

11. Define a *Mean Solar* second, and a *Sidereal* second. Which of them is the longer unit, and why?

Describe the sun-dial. What kind of time does it measure?

12. What is a *fixed* star and why does it appear fixed? To which constellations do the following fixed stars belong—*Sirius*, *Aldebaran*, *Antares*, *Betelgeuse* and *Rigel*?

What and where is the Milky way? What are Nebulae? Can you mention any visible with the naked eye?

1924

MATHEMATICS—PASS

First Paper

Six questions to be attempted.

1 Find $\sin 18^\circ$ and the general solution of

$$4 \sin 4x + 1 = \sqrt{5}$$

2. Reduce $(a - i\beta)^{x+iy}$ to the form $A + iR$.

3. State and prove De Moivre's Theorem.

4. Show that

$$\tan(2 \tan^{-1} a) = 2 \tan(\tan^{-1} a + \tan^{-1} a^3)$$

and $\tan^{-1} a = 2 \tan^{-1}(\operatorname{cosec} \tan^{-1} a - \tan \cot^{-1} a)$.

5. In a plane triangle, with the usual notation, prove that

$$\text{area} = \frac{1}{2}bc \sin A = \frac{abc}{4R}.$$

Deduce that

$$4 \cos \frac{A}{2} \cos \frac{B}{2} \cos \frac{C}{2} = \frac{S}{R}.$$

6. Prove that if θ lies between $-\frac{\pi}{4}$ and $+\frac{\pi}{4}$,

$$\theta = \tan \theta - \frac{1}{3} \tan 3\theta + \frac{1}{5} \tan^5 \theta - \dots$$

Show that $\frac{\pi}{8} = \frac{1}{1.3} + \frac{1}{5.7} + \frac{1}{11.13} + \dots$

7. Expand $\cos a$ in ascending powers of a .

Hence or otherwise obtain an expression for $\cos^2 a$ in powers of a .

8. Sum to n terms the series

$$\sin a + \sin 2a + \sin 3a + \dots$$

Deduce the value of

$$\sin^2 a + \sin^2 2a + \sin^2 3a + \dots \text{ to } n \text{ terms.}$$

9. Find the area of triangle in terms of the coordinates of its vertices. Show that the points $(3a, 0)$, $(0, 3b)$ and $(a, 2b)$ are on a straight line.

10. Find the equation of a straight line through the intersection of two given straight lines. Show that the equation to the line joining the origin to the point of intersection of $2x + 5y = 4$ and $3x + 2 = 2y$ is $8x + y = 0$.

11. Find the equation to a circle having its centre at (α, β) and radius r , and show that the equation of the tangent at the point (x_1, y_1) may be written as

$$(x - x_1)(x_1 - \alpha) + (y - y_1)(y_1 - \beta) = 0.$$

12. Show that the locus of the middle point of a chord of a parabola which passes through a fixed point is a parabola.

13. Prove that through the point (x_1, y_1) there pass in general two tangents to the parabola $y^2 = 4a(x+a)$, and obtain the locus of (x_1, y_1) when these tangents cut each other at right angles.

14. Obtain the equation to an ellipse whose focus is the point $(-1, 1)$, whose directrix is the line $x - y + 3 = 0$, and whose eccentricity is $\frac{1}{2}$. Find also the coordinates of centre.

15. Define the eccentric angle of a point on the ellipse.

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

Obtain the equation of a straight line joining two points on the ellipse whose eccentric angles are given.

16. Define a hyperbola conjugate to a given hyperbola.

Prove that if a pair of conjugate diameters cut the hyperbola and its conjugate in P and D, then,

$$CP^2 - CD^2 = a^2 - b^2,$$

where C is the centre of the system.

MATHEMATICS—PASS

Second Paper

Candidates are permitted to attempt ten questions only.

1. Differentiate

$$(1) \frac{1 - \sqrt{x}}{1 + \sqrt{x}}; \quad (2) \tan x + \sec x.$$

2. If $y = x^3 \log x$, calculate the value of

$$\frac{d^4 y}{dx^4}.$$

3. Expand e^x in a series of ascending powers of x .

4. Find the value of $(1-x) \tan \frac{\pi x}{2}$ when $x=1$.

5. Calculate the greatest value of

$$\frac{x}{(1+x)(1+x)}.$$

6. Find the relation between r and p in the parabola

$$r(1 + \cos \theta) = 2a.$$

7. Find the radius of curvature in the ellipse

$$x = a \cos \theta, y = b \sin \theta.$$

8. Integrate

$$(1) \int \tan^2 x dx;$$

$$(2) \int \frac{dx}{\sqrt{1-x-x^2}}$$

9. Integrate

$$(1) e^x dx;$$

$$\frac{(x-1)dx}{(x-3)(x+2)}.$$

10. Prove that

$$\int_0^{\frac{\pi}{2}} \cos^n x dx = \frac{1}{2}$$

11. Find the area of a loop of the curve.

$$r^2 = a^2 \cos 4\theta.$$

12. Calculate the length of an arc of the semi-cubical parabola.

$$ay^2 = x^3.$$

13. Integrate $\frac{dy}{dx} = 2xy$.

14. Integrate $\frac{d^2y}{dx^2} + \frac{dy}{dx} = 0$.

15. Find the curves in which the subnormal is constant.

MATHEMATICS—PASS

Third Paper

Try any six questions.

1. In what direction does the resultant fluid thrust on a plane area act in a fluid at rest? Define pressure at a point of a fluid,

A liquid is contained in a cylindrical phial. The contents are transferred to another cylindrical phial of twice the diameter of the first. Compare the fluid pressure at any point of the bottom of the second phial with that at any point of the bottom of the first phial.

2. Describe in outline a Bramah's Press.

Show how Bramah's Press exemplifies the Principle of work.

3. Obtain the formula $W = Vs$, where W is the weight of a substance, V its volume, and s its specific gravity.

The specific gravity of a mixture of two liquids of specific gravities s and s' and volumes V and V' is found to be δ . Find the volume of the mixture.

4. Show that the surface of a heavy liquid at rest under atmospheric pressure is a horizontal plane.

Show that points in the above liquid at which the pressure is the same lie in a horizontal plane.

5. State and prove the formula for the calculation of the magnitude of the resultant thrust on a plane surface immersed in a liquid.

Show that the resultant thrust is unaltered if the plane be turned in any manner about its centre of gravity.

6. Find the centre of pressure of a square immersed vertically in a liquid with one side in the surface.

Show that the position of the centre of pressure to the square will not be altered if the square be turned about the side in the surface.

7. State and establish the conditions of equilibrium of a body floating freely in a liquid.

A solid uniform cylinder floats freely in a liquid with axis horizontal. A slice is cut off from one end of the cylinder by a section perpendicular to the axis. Will the cylinder rise or sink?

8. Describe and explain the action of the common pump.

What is the limit of height to which water can be raised by common pump?

9. Define *declination*, *right ascension*, *latitude*, and *longitude* of a celestial object.

What are the declinations, right ascensions, latitudes, and longitudes of (a) First Point of Libra, and (b) Celestial Pole?

10. Show that the altitude of the celestial pole at any place is equal to the latitude of the place.

What is the lowest latitude at which it is possible to have a mid-night sun? What is the highest latitude at which it is possible to see the sun in the zenith at noon?

11. Describe the Transit Instrument.

Point out briefly the errors to which the instrument is liable.

12. Describe the phenomenon of astronomical refraction and show that its effect is to raise the position of a heavenly body in the sky.

The apparent altitude of a star is 30° . Find the true altitude, the coefficient of refraction being $58'2''$.

13. Explain the phenomenon of the Seasons.

Show how the heat of summer is explained mainly by two considerations.

14. State the third law of Kepler and deduce it from the law of gravitation.

Show that, of two planets, the one nearer to the sun has the greater velocity.

15. Explain the phenomenon of *aberration* of light.

Show that the effect of aberration is to cause each star to describe a small ellipse round its true position.

16. Explain what you understand by: Milky Way, Star Clusters, Nebulae, Binary Stars, and Variable Stars.

Explain the use of the Spectroscope in determining the proper motions of the stars along the line of sight.

1925

MATHEMATICS—PASS

First Paper

Only seven questions to be attempted, but not more than four from each group.

A

1. In any plane triangle, with the usual notation, prove that

$$r_1 = s \tan \frac{A}{2} = 4 R \sin \frac{A}{2} \cos \frac{B}{2} \cos \frac{C}{2}.$$

Show also that

$$r_1 + r_2 + r_3 - r = 4R,$$

where R is the radius of the circum circle, r_1 , r_2 , r_3 , and r are respectively the radii of the escribed and inscribed circles.

2. If θ and ϕ satisfy the equation

$$\sin \theta + \sin \phi = \sqrt{3} (\cos \phi - \cos \theta),$$

then will

$$\sin 3\theta + \sin 3\phi = 0.$$

3. Write down the general values of :

(1) $\tan^{-1}(-1)^m$, where m is an integer ;

(2) $\tan^{-1}(\sin(\cos^{-1}\sqrt{\frac{3}{2}}))$.

4. Solve the equations :

$$(1) 2 \sin^2 x + \sin^2 2x = 2 ;$$

$$(2) \cos \theta - \sin \theta = \sqrt{2}.$$

5. If $x = \cos \frac{\pi}{2^r} + i \sin \frac{\pi}{2^r}$, prove that

$$x_1 \cdot x_2 \cdot x_3 \dots \text{ad inf.} = \cos \pi.$$

Find an equation whose roots are the squares of the roots of the equation

$$x^2 - 2x \cos \theta + 1 = 0.$$

6. Find the sum of the series

$$\sin a + \sin 2a + \sin 3a + \dots + \sin na.$$

Sum to n terms the series

$$\sin^2 a + \sin^2 2a + \sin^2 3a + \dots$$

7. Apply the exponential values of the sine and cosine to show that :

$$(1) \quad \frac{\sin 2\theta}{1 - \cos 2\theta} = \cot \theta ;$$

$$(2) \quad \cos 2\theta = 1 - 2 \sin^2 \theta.$$

8. Show that :

$$(1) \quad \tan^{-1}(\frac{1}{2} \tan 2A) + \tan^{-1}(\cot A) + \tan^{-1}(\cot A) = 0 ;$$

$$(2) \quad \tan\left(\frac{\pi}{4} + \frac{1}{2} \cos^{-1} \frac{a}{b}\right) + \tan\left(\frac{\pi}{4} - \frac{1}{2} \cos^{-1} \frac{a}{b}\right) = \frac{2b}{a}.$$

B

1. Find the equation to the straight line which passes through the intersection of the straight lines

$$2x + 3y + 4 = 0 \text{ and } 3x + 4y - 5 = 0.$$

and is perpendicular to the straight line

$$6x - 7y + 8 = 0.$$

2. Find the condition that the general equation of the second degree may represent two straight lines.

Does the equation

$$12x^2 + 7xy - 10y^2 + 13x + 45y - 35 = 0$$

represent two straight lines ?

3. Show that the straight line

$$y = mx + a \sqrt{1 + m^2}$$

is always a tangent to the circle

$$x^2 + y^2 = a^2.$$

Find the coordinates of the point of contact.

4. Find the condition that the straight line $y = mx + c$ may touch the parabola $y^2 = 4ax$.

Prove that through any given point (x, y) there pass in general two tangents to the parabola.

5. Prove that the middle points of a system of parallel chords of a parabola all lie on a straight line which is parallel to the axis.

Find the equation to the chord of the parabola which is bisected at the point (h, k) .

6. Define—*auxiliary circle of an ellipse, eccentric angle of any point on an ellipse, director circle of an ellipse.*

If SY and S'Y' be the perpendicular from the foci upon the tangent at any point P of an ellipse, show that Y and Y' lie on the auxiliary circle.

7. Define *equilateral hyperbola*. What is its eccentricity?

In an equilateral hyperbola prove that CP and BD are equal and are inclined to the axis at angles which are complementary.

8. Write down the equations to a hyperbola and its conjugate.

Prove that the chords of a hyperbola which touch the conjugate hyperbola are bisected at the point of contact.

MATHEMATICS—PASS

Second Paper

Attempt only ten questions.

1. Find, from first principles, the differential co-efficient of $\sin \frac{x}{a}$, when a is constant.

If $y = \frac{x}{2} \sqrt{a^2 - x^2} - \frac{a^2}{2} \sin^{-1} \frac{x}{a}$, find $\frac{dy}{dx}$.

2. Enunciate Taylor's Theorem.

Show that

$$\log(1 + \sin x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{12} + \dots$$

3. If $y = a \cos(\log x) + b \sin(\log x)$,

prove that $x^2 \frac{d^2 y}{dx^2} + x \frac{dy}{dx} + y = 0$.

4. Find the maximum and minimum values of
 $y = 2x^3 - 15x^2 + 36x + 6$.

5. Find the condition that the curves
 $ax^2 + by^2 = 1$ and $a^1 x^2 + b^1 y^2 = 1$

cut each other at right angles.

6. In the conic $\frac{l}{r} = 1 - e \cos \theta$, show that the locus of the extremity of the polar subtangent is a right line which you are required to specify.

7. Establish $\rho = \pm \frac{\left\{1 + \frac{dy^2}{dx^2}\right\}^{\frac{3}{2}}}{d^2y}{dx^2}$

8. In the curve $y = \log (\sin x)$, prove that $\rho \sin x = 1$.

9. Integrate

$$\int \sqrt{\frac{1+x}{1-x}} dx; \int \sqrt{x_2 - a_2} dx.$$

10. Integrate

$$\int x^3 e^x dx; \int \frac{x dx}{x^2 - 12x + 35}.$$

11. Prove that

$$\text{Either, } \int_{\alpha}^{\beta} (x - \alpha)(\beta - x) dx = \frac{\pi}{8} (a - \beta)^2.$$

$$\int_0^{\frac{\pi}{2}} \sin^6 \theta \cos^3 \theta d^3 = \frac{\pi}{8}.$$

12. Calculate the perimeter of the curve

$$r = a (1 - \cos \theta).$$

13. Calculate the area of the ellipse

$$x^2/a^2 + y^2/b^2 = 1.$$

14. Solve

$$1 + \left(\frac{dy}{dx}\right)^2 = x. \quad \frac{dy}{dx} \quad \frac{d^2y}{dx^2}$$

15. Solve

$$\frac{dy}{dx} = \frac{xy}{x^2 + y^2}.$$

16. Prove that all curves for which the square of the normal is equal to the square of the radius are either circles or rectangular hyperbolas

MATHEMATICS—PASS**Third Paper**

Not more than five questions are to be attempted.

1. Define pressure at a point of fluid in a given direction. In what way does the pressure at a given point of a fluid in a vertical direction differ from that in a horizontal direction ?

Determine the fluid pressure at the centre of a cubical vessel, one foot high, which is filled to the brim with water. State what unit of fluid pressure you use in your calculation.

2. Prove that the free surface of a fluid at rest is a horizontal plane.

A cylindrical tumbler is partially filled with water and placed on a horizontal table. If it now be slightly tilted on one side will the free surface rise or will it fall ?

3. The dam of a reservoir is 200 yards long and its face towards the water is rectangular and inclined at 10° to the horizon. Find the thrust acting on the dam when the water is 30 feet deep.

Show that the horizontal component of the thrust is independent of the inclination of the face of the dam towards the water.

4. Define centre of pressure of a plane area immersed in a liquid.

Find the centre of pressure of a rectangular area immersed vertically in water with one side of the surface.

5. Prove that when a body floats in water the weight to the body is equal to the weight of the water displaced.

A body floats in water under atmospheric pressure. If the atmosphere be removed will the body rise or sink ?

6. Describe and explain the action of a syphon.

Water is being transferred from one vessel into another by the action of a syphon. Show that the centre of gravity of the entire liquid descends.

7. Define—Celestial Sphere, Celestial Poles, Celestial Equator, Terrestrial Poles and Terrestrial Equator. How do you distinguish between the Celestial North Pole and the Celestial South pole ?

Explain how to an observer at the equator, the celestial equator passes through the zenith and the nadir and coincides with the prime vertical.

8. Give a short description of the transit instrument, with an outline sketch.

What is collimation error, and how is it eliminated ?

9. What is atmospheric refraction, and how does it affect the position of a heavenly body just on the point of rising ? What is the coefficient of atmospheric refraction ?

Explain how from astronomical observations this coefficient can be determined.

10. Explain the phenomenon of the seasons.

Explain the heat of June and how the mean temperature is higher in August than in June.

• 11. Mention in order the principal inferior and superior planets. What and where are the asteroids ?

Describe, with an explanatory diagram, the phases of an inferior planet.

12. Define Mean Time and Sidereal Time.

Show how to convert Sidereal Time into Mean Time and vice versa.

1926

MATHEMATICS—PASS

First Paper

N. B.—*All the questions are of equal value. You are not permitted to attempt more than seven questions, which carry full marks and not more than four from the same group.*

GROUP A.

1. Show how to transform from polar coordinates to rectangular Cartesian coordinates, and vice versa.

Find the area of a triangle in polar coordinates, the vertices being (O, O) , (ρ', θ') , $(\rho'' \theta'')$, and transform the result to Cartesian co-ordinates.

2. If (x, y) be the co-ordinates of a point referred to rectangular axes OX, OY , and (x', y') the co-ordinates of the same point referred to new rectangular axes OP'', OY' , inclined to the former at an angle θ , express (x, y) in terms of (x', y') .

The equation $x^2 - a^2 = y^2$ is transformed to $xy = k^2$, by a change of rectangular axes; find the inclination of the latter axes to the former and the value of k^2 .

3. Find the condition that the two straight lines

$$ax + by + c = 0 \text{ and } ay + b'x + c' = 0$$

given in rectangular coordinates, may be at right angles.

Find the equation of a straight line which passes through $(x'y')$ and is perpendicular to the joint of $x'y'$ and (x''', y''') .

4. Show that $x^2 + y^2 + 2gx + 2fy + c = 0$ represents a circle, and determine the centre and radius of this circle.

Find the equation of a circle which touches the axes at $(0, 1)$ and $(1, 0)$.

5. Show that $y = mx + \frac{a}{m}$ touches the parabola $y^2 = 4ax$ whatever the value of m may be.

Find the co-ordinate of the point of intersection of the two tangents.

$$y = mx + \frac{a}{m} \text{ and } y = m'x + \frac{a'}{m'},$$

and deduce the condition that this point of intersection may lie on the latus rectum.

6. Show that the condition that (x', y') and (x'', y'') may be the extremities of a pair of conjugate diameters of the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1 \text{ is } \frac{x'y''}{a^2} - \frac{y'y''}{b^2} = C.$$

Show that in this case $x'y'' - x''y' = \pm ab$.

Show that the equation of a hyperbola, referred to the asymptotes as axes, is of the form $xy = k^2$.

Show that the area of a triangle formed by the two asymptotes and any tangent is constant.

GROUP B.

8. If r, r_1, r_2, r_3 be the radii of the inscribed and escribed circles of a triangle, show that

$$\frac{1}{r} + \frac{1}{r_1} + \frac{1}{r_2} + \frac{1}{r_3}.$$

Show that the distances of the incentre of a triangle from the centres of an escribed circle are

$$a \sec \frac{A}{2}, b \sec \frac{B}{2}, c \sec \frac{C}{2}.$$

9. Obtain general values of θ in the equation :—

(1) $\cos \theta + \sqrt{3} \sin \theta = \sqrt{2}$;

(2) $\tan \theta + \tan 2\theta = \tan 3\theta$.

10. Prove that $\tan^{-1} \frac{1}{4} + 2 \tan^{-1} \frac{1}{3} = \frac{\pi}{4}$.

Solve $\tan^{-2} x + \tan^{-3} x = \frac{\pi}{4}$,

11. Sum to n terms :

(1) $\cos a + \cos \left(a + \frac{2\pi}{n} \right) + \cos \left(a + \frac{4\pi}{n} \right) + \dots$

(2) $\operatorname{cosec} a + \cos 2a + \operatorname{cosec} 4a + \dots$

12. If θ be the circular measure of a positive acute angle, show that $\sin \theta \angle \theta = \angle \tan \theta$.

If $\frac{\sin \theta}{\theta} = \frac{5045}{5046}$, find the value of θ approximately in degrees.

13. State fully De Moivre's Theorem.

Find all the roots of $x^7 = 1$ by the help of De Moivre's Theorem

14. Obtain an expansion of $\sin \theta$ in ascending powers θ .

Show that $\sin \theta = \frac{e^{i\theta} - e^{-i\theta}}{2i}$.

MATHEMATICS—PASS

Second Paper

Answer **eight** questions, **four** from Group A and **four** from Group B.

GROUP A.

1. Given that

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0.$$

establish, from *first principles*, that

$$\frac{dy}{dx} + \frac{ax + hy + g}{hx + by + f} = 0.$$

2. Graph the functions, $y = \sin x$ and $y = \sin^{-1}(x)$, and show that they are the images of each other with respect to the line $y = x = 0$.

Find the range of values of the independent variable x , for which the above functions are defined, and obtain the second differential of $\sin^{-1}(x)$ and also its second differential coefficient.

3. If
$$u \equiv Ax^\alpha y^\beta + Bx^{\alpha'} y^{\beta'} + \dots$$

$$\equiv MAx^\alpha y^\beta;$$

where $\alpha + \beta = \alpha' + \beta' = \dots = n$ and $A, B, \&c.$ are constants, prove that

$$x \frac{dy}{dx} + y \frac{dx}{dy} = nu.$$

If $u = \log \left(\frac{x^3 + y^3}{x^2 + y^2} \right)$

prove that
$$x \frac{dy}{dx} + y \frac{du}{dy} = 1.$$

4. Enunciate Taylor's theorem.

Expand $\log(1+e^x)$ in powers of x up to the fourth.

5. (1) Show that $x^{\frac{1}{2}}$ is a *maximum* when $x = e$.

(2) Find the intercept made by the curve

$$y = x \cot \left(\frac{\pi x}{2a} \right)$$

upon the axis of y .

6. Find the angles at which the curves (1) $x^2 = ay$ and (2) $x^3 + y^3 = 3axy$ cut each other at their points of intersection.

7. Find the envelope of the system of line $\frac{x}{l} + \frac{y}{m} = 1$, where l and m are connected by the equation $\frac{l}{a} + \frac{m}{b} = 1$, a, b being constants.

8. The points of a curve are given parametrically by

$$x = a \cos \theta \text{ and } y = b \sin \theta,$$

find the radius of curvature at $\left(\frac{a}{\sqrt{2}}, \frac{b}{\sqrt{2}} \right)$.

GROUP B.

1. Integrate :

$$(1) \int \sqrt{a^2 - x^2} dx;$$

$$(2) \int \frac{(x-2)}{\sqrt{2x^2 - 8x + 5}} dx.$$

2. Integrate :

$$\int \sqrt{1 + \sin x} dx;$$

$$\frac{x+1}{x^2+4x+4} \cdot dx.$$

3. If $f(x) = f(a+x)$, for all values of x , prove that

$$\int_0^{na} f(x) dx = n \int_0^a f(x) dx$$

4. Either, Show that

$$\int_{\alpha}^{\beta} \frac{dx}{x \sqrt{(x-\alpha)(\beta-x)}} = \frac{\pi}{\sqrt{\alpha\beta}}.$$

Or, Show that
$$\int_0^{\frac{\pi}{2}} \sin^3 \theta \cos^4 \theta \frac{8}{315}.$$

5. Find by integration, the area of the ellipse

$$ax^2 + 2hxy + by^2 = 1.$$

6. If $s = c \tan \psi$ is the *intrinsic* equation of a curve show that its *cartesian* equation is $y = c \cos \left(\frac{x}{c} \right)$, given that when $\psi = 0$, $x = 0$, and $y = c$.

7. Integrate :

$$(1) (x^2 - 2y^2) + xy \frac{dy}{dx} = 0;$$

$$(2) x \frac{dy}{dx} + 2y = x^2.$$

8. Integrate :

$$(1) \frac{dy}{dx} + \frac{ax + hy + g}{hx + by + f} = 0;$$

$$(2) \frac{d^2y}{dx^2} + a^2y = 0.$$

MATHEMATICS—PASS

Third Paper

Any six questions carry full marks ; but you are not permitted to attempt more than three from each group.

GROUP A.

1. Define *specific gravity*.

Equal volumes of fluids whose specific gravities are 5 and 7 are mixed together ; find the specific gravity of the mixture. If equal weights of the same fluids are mixed together, what would be the specific gravity of the mixture ?

2. Distinguish between *whole pressure* and *resultant pressure*.

A hollow cone, vertex upwards, is just filled with liquid ; find the whole pressure on the curved surface.

3. Obtain the conditions of equilibrium of a body freely floating in a liquid.

A sphere of ice floats in water, and uniformly melts. Does its centre rise or sink ?

4. Define *centre of pressure*.

Find the centre of pressure of a square just immersed in a liquid with one side in the surface.

5. A bundle of cotton-wool weighs in air, exactly the same as a block of iron. Which is really the heavier ? Give reasons.

The specific gravity of mercury is 13.5 and the barometer stands at 30 in. A bubble of air, the volume of which is 0.0001 cubic in when it is at the bottom of a lake 11 feet deep, rises to the surface. Find the volume when it reaches the surface.

6. Describe the common hydrometer.

A hydrometer marks graduations, a , b , c in liquids whose densities are ρ_1 , ρ_2 , ρ_3 respectively. Show that

$$\frac{b-c}{\rho_1} + \frac{c-a}{\rho_2} + \frac{a-b}{\rho_3} = 0.$$

GROUP B.

1. Define—*right ascension*, *stationary point*, *direct*, and *retrograde motion* of a planet, and *horizontal parallax*.

A person travelling eastward goes round the world ; at the end of his journey he finds that he has gained a day. Explain this.

2. How would you find the coefficient of refraction if the latitude of a place is not known ?

Calculate the latitude of a place at which the upper and lower meridian altitudes of a circum-polar star were 63° and 45° respectively the coefficient of refraction being $58''$.

3. Explain the nature of the phenomena (1) *precession* of the equinoxes, (2) *mutation*. By what observations may their existence be detected?

4. What is the equation of time? Show that it vanishes four times a year.

On a certain day the sun rises at 6 h. 56. and sets at 4 h. 38 m. mean times. Find the equation of time for that day.

5. Explain what is meant by twilight. Find the duration of twilight at the equator during the equinoxes.

Find the lowest latitude at which it is possible for twilight to last all night.

6. Explain briefly the phenomena of a *lunar* eclipse. Discuss the greatest and least number of solar and lunar eclipses possible in a year.

1927

MATHEMATICS—PASS

First Paper

Full marks for seven questions only.

GROUP A.

You are not permitted to attempt more than four questions from this group.

1. Find the area of a quadrilateral $ABCD$ in terms of the sides AB , BC , CD , AD and the angles A and C .

Obtain the area in a quadrilateral which can be inscribed in one and circumscribed about another circle.

2. (1) Solve $\sin^{-1} \frac{2a}{1+a^2} + \sin^{-1} \frac{2b}{1+b^2} = 2 \tan^{-1} x$.

(2) Find all the positive integral solutions of
 $\tan^{-1} x + \cot^{-1} y = \tan^{-1} 3$.

(1) Find the values of $(-1)^{\frac{1}{2}}$.

3. If $(a_1 + b_1 \sqrt{-1})(a_2 + b_2 \sqrt{-1}) \dots (a_n + b_n \sqrt{-1})$
 $= A + B \sqrt{-1}$,

Show that $\tan^{-1} \frac{b_1}{a_1} + \tan^{-1} \frac{b_2}{a_2} + \dots + \tan^{-1} \frac{b_n}{a_n} = \tan^{-1} \frac{B}{A}$.

4. (1) What sine is z , when z is of the form $x + y\sqrt{-1}$?

(2) Expand $\tan^{-1} x$ in a series of powers of x .

5. (1) Find the sum of the sines of a series of angles which are in A.P.

(2) Find the sum of n terms of the series

6. Prove that

$$(1) \quad ii = e^{-(4n+1)\frac{\pi}{2}};$$

$$(2) \quad \tan \left\{ i \log \frac{a-bi}{a+bi} \right\} = \frac{2ab}{a^2 - b^2}.$$

GROUP B.

You are not permitted to attempt more than four questions from this group.

1. (1) Show that any equation of the first degree in x and y always represents a straight line.

(2) Find the question to the straight line drawn at right angles to the straight line $\frac{x}{a} - \frac{y}{b} = 1$ through the point where it meets the axis of x .

2. Find the equation to the straight line passing through the origin and the point of intersection of $x - y - 4 = 0$ and $7x + y + 20 = 0$, proving that it bisects the angle between them.

3. Show that two of the straight lines represented by the equation $ax^3 + bx^2y + cxy^2 + dy^3 = 0$ will be at right angles if $a^2 + ac + b + dd^2 = 0$.

4. (1) Find the equation to the circle which is described on the line joining the points (x_1, y_1) and (x_2, y_2) as diameter.

(2) Show that the radical axes of three circles, taken in pairs, meet in a point.

5. (1) Prove that the middle points of a system of parallel chords of a parabola lie on a straight line which is parallel to the axis.

(2) Find the equation to the chord of a parabola which is bisected at any point (h, k) .

6. Define conjugate diameters of an ellipse.

Show that

(1) the eccentric angles of the ends P and D of a pair of conjugate diameters differ by a right angle.

(2) the area of the parallelogram formed by the tangent at the ends of the diameters PCP' and DCD' is constant.

7. (1) If e and e' be the eccentricities of a hyperbola and its conjugate, prove that

$$\frac{1}{e^2} = \frac{1}{e'^2} = 1.$$

(2) Show that the portion of a tangent to a hyperbola intercepted between the asymptotes is bisected at the point of contact.

MATHEMATICS—PASS

Second Paper

Seven questions carry full marks, but not more than four are to be attempted from either Group A or Group B.

GROUP A.

1. Define 'Differential Coefficient' of $\phi(x)$ with respect to x .

If $y = \sin^{-1}x$, prove that

$$\frac{dy}{dx} = \pm \frac{1}{\sqrt{1-x^2}}.$$

Draw the graph of $\sin^{-1}x$ and explain the double sign in the differential coefficient.

What sign would you attach when y increases from $-\frac{\pi}{2}$ to $+\frac{\pi}{2}$?

2. If

$$y = \frac{ax+b}{cx+d}$$

prove that

$$2\frac{dy}{dx} \cdot \frac{d^2y}{dx^2} = 3 \left(\frac{d^2y}{dx^2} \right)^2.$$

3. Define *partial* differential coefficients of a function of two variables with respect to one of them. Show that if $f(x, y) = 0$.

$$\frac{dy}{dx} = - \frac{\frac{\partial f}{\partial x}}{\frac{\partial f}{\partial y}}$$

When $f(x, y) = 3x^2 + 2xy - y^2 + 2x + 4y - 1 = 0$

interpret

$$\frac{\partial f}{\partial x} = 0 \text{ and } \frac{\partial f}{\partial y} = 0,$$

and show how they enable you to find the co-ordinates of the centre of the conic represented by $(x, y) = 0$.

4. What inferences as to the behaviour of the function $y=f(x)$ can you draw from a consideration of the changes in

the sign of $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ as x varies?

Find the maximum and minimum ordinates on the curve $y(x^2+x+1) = 2x^2+1$.

5. Enunciate MacLaurin's theorem for the expansion of a function of a single variable.

Prove that

$$\tan\left(\frac{\pi}{4} + h\right) = 1 + 2h + 2h^2 + \frac{8}{3}h^3 + \frac{10}{3}h^4 + \dots$$

Deduce $\tan 46^\circ$ to five place of decimals given that $\pi = 3.1415^\circ$.

6. Show that all the points of inflexion of the family of curves presented by

$$\frac{dy}{dx} = \frac{ax + by}{ax + by}$$

lie on one or other of two straight lines passing through the origin which you are to specify.

7. Prove that the catenary

$$y = a \cos\left(\frac{x}{a}\right)$$

the length of the perpendicular NK from the foot of the ordinate PN to the tangent at P is constant, and that the length of the arc, measured from vertex A of the curve to the point P , is equal to PK .

8. Given that, for the curve $y=f(x)$

$$\rho = \pm \frac{\left\{1 + \left(\frac{dy}{dx}\right)^2\right\}^{\frac{3}{2}}}{\frac{d^2y}{dx^2}}$$

ρ being the radius of curvature at (x, y) , find the radius of curvature and the co-ordinates of the centre of curvature at the point $(3, 4)$ of the rectangular hyperbola $xy = 12$.

GROUP B.

1. Integrate :

$$(1) \int \sqrt{x^2 - a^2} \cdot dx ;$$

$$(2) \int \frac{x dx}{(x-1)(x^2+1)}.$$

2. (1) Given that

$$\int \frac{dx}{\sqrt{a^2+x^2}} = \log \left(\frac{x + \sqrt{a^2+x^2}}{a} \right).$$

deduce

$$\int \sqrt{a^2+x^2} dx.$$

(2) Integrate :

$$\int \frac{\sqrt{x}}{\sqrt{a^2-x^3}}.$$

3. Prove that

$$\int_0^{\frac{\pi}{2}} \phi(\sin x) dx = \int_0^{\frac{\pi}{2}} \phi(\cos x) dx.$$

deduce that

$$\int_0^{\frac{\pi}{2}} \frac{\sqrt{\sin x}}{\sqrt{\sin x} + \sqrt{\cos x}} dx = \frac{\pi}{4},$$

and integrate

$$\int_0^{\frac{\pi}{2}} \log(\sin x) dx.$$

4. Find the entire length of the cardioid $r=a(1-\cos \theta)$, and show that the arc of the upper half of the curve is bisected by θ .

$$= \frac{2\pi}{3}.$$

5. Sketch roughly the curve.

$$y^2 = x^2(4-x^2),$$

and show that the area of one loop $= \frac{16}{3}$.

6. Solve

$$\frac{dy}{dx} = \frac{ax + by}{a_1x + b_1y}.$$

Interpret the solution *geometrically*.

7. Solve :

$$(1) \quad y^2 + x^2 \frac{dy}{dx} = xy \frac{dy}{dx};$$

$$(2) \quad (1 + x^1) \frac{dy}{dx} = 4x^2 - 2xy.$$

8. (1) Solve :

$$\frac{d^2y}{dx^2} - 2 \frac{dy}{dx} - 3y = 0.$$

(2) Show that the only curve which is such that the tangents drawn to it from any point are equal is the circle.

MATHEMATICS—PASS

Third Paper

Any six questions carry full marks ; but you are not permitted to attempt more than four from each group.

GROUP A.

1. Distinguish between the measures of *mass*, *density*, and *specific gravity*.

A vertical cylinder of density $\frac{7\rho}{4}$ floats in two liquids, the density of the upper liquid being ρ , and of the lower 2ρ ; if the length of the cylinder be twice the depth of the upper liquid, find its position of rest.

2. What is meant by *pressure at a point* ? Show that the pressure at a point is the same in all directions.

A vessel containing water with a cork floating in it is placed under the receiver of an air-pump. As the air is exhausted from the receiver, will the cork rise or sink in the water ? Give reasons for your answer.

3. Show that the depth of the centre of pressure for a plane area immersed in a liquid in which the pressure increases with the depth is greater than the depth of the centre of gravity. Can the two points ever coincide ?

Find the centre of pressure of a triangle immersed in a fluid with its base in the surface.

4. If a piece of glass float in the mercury within a barometer, will the mercury stand higher or lower in consequence?

The length of a barometer-tube is 33 inches. A quantity of air which would fill $\frac{1}{10}$ th inch of the tube at pressure 30 inches of mercury gets introduced into the tube. What is the proper reading when the faulty barometer indicates 29 inches?

5. Describe the *common pump*, and explain its action.

Obtain the height through which the water rises after n strokes of the piston.

6. Show how to find the resultant vertical pressure of a liquid on a surface when it acts upwards.

A cylinder is half-filled with liquid and held with its axis vertical. If r be the radius of the circular base and h the height, find (1) the whole pressure, (2) the resultant pressure on either of the two parts into which it would be divided by a plane through the axis.

GROUP B.

1. Give the usual *three* methods for locating the position of a star in space, illustrating your answer by diagrams. Discuss the respective merits of these methods, and locate the position of the celestial pole with their help.

2. Represent on a diagram the relative positions of the equator, ecliptic, and horizon of Calcutta as sunset on the evenings of the vernal and autumnal equinoxes.

Truro is marked on a map as being 20 min. 32 sec. slow by Greenwich time, and Norwich as 5 min. 8 sec. fast; what is the difference of their longitudes in degrees?

3. Explain, by means of a diagram, how the change in the sun's declination produces the succession of the seasons.

Given that the sun rose on a certain day at 5 h. 18 min. and set at 6 h. 45 min., by how much does the length of the morning exceed the length of the afternoon.

4. Define—annual *parallax* of a star, *aberration*, *earth's way* *lunation*

If a star is situated on the ecliptic, show that its *parallax* is nothing when its *aberration* is a maximum, and vice versa when its *aberration* is nothing its *parallax* is a maximum.

5. Assuming that the planets move round the sun in circles, use Kepler's third law in deducing the law of inverse squares of gravitation.

The two satellites of Mars have periodic times, which are about 30 hours and $7\frac{1}{2}$ hours respectively; find the ratio of their mean distances from Mars.

6. Prove that the refraction of a heavenly body varies as the tangent of the apparent zenith distance.

Find the latitude of a place at which the observed meridian zenith distances of a circumpolar star were $47^\circ 28'$ and $22^\circ 18'$, given that the tangents of these angles are 1.09 and 0.41 respectively, and the coefficient of refraction $58''\cdot 2$.

7. Calculate the conditions for a lunar eclipse.

How are solar and lunar ecliptic limits found?

1928

MATHEMATICS—PASS

First Paper

GROUP A

1. Find the general value of an angle such that its cosine is to its tangent as 5 is to 2.

If x and y vary so that their sum is constant, find between what limits $\sin x + \sin y$ ranges, and its greatest value.

2. If r, r_1, r_2, r_3 be the radii of the inscribed and escribed circles of a triangle, show that

$$\frac{1}{r} = \frac{1}{r_1} + \frac{1}{r_2} + \frac{1}{r_3}$$

Show also that $r_2 r_3 + r_3 r_1 + r_1 r_2 = s^2$, where s is half the sum of the sides of the triangle.

3. (1) Prove that

$$\cos \frac{\pi}{11} + \cos \frac{3\pi}{11} + \cos \frac{5\pi}{11} + \cos \frac{7\pi}{11} + \cos \frac{9\pi}{11} = -\frac{1}{2}.$$

(2) Solve the equation

$$\tan^2 x + \cot^2 x = 2.$$

4. Obtain the sum to n terms of the series

$$\sin^2 a - \sin(a + \beta) + \sin(a + 2\beta) - \dots (-1)^{n-1} \sin(a + \overline{n-1}\beta).$$

Prove that

$$\sin^2 a + \sin^2\left(a + \frac{2\pi}{n}\right) + \sin^2\left(a + \frac{4\pi}{n}\right) + \dots \sin^2\left(a + \frac{\overline{n-1}\pi}{n}\right) = \frac{n}{2}$$

5. Obtain an expansion of θ in powers of $\tan \theta$.

Prove that

$$\pi = 2\sqrt{1\left(1 - \frac{1}{3^2} + \frac{1}{5^2} - \frac{1}{7^2} + \dots\right)}.$$

6. Prove De Moivre's Theorem for a negative integral exponent.

Find the general value of θ which satisfies the equation $(\cos \theta + l \sin \theta)(\cos 2\theta + l \sin 2\theta) \dots (\cos n\theta + l \sin n\theta) = 1$.

7. (1) Expand $\tan \theta$ in powers of θ .

(2) Show that

$$\tan^{-1}\left(\frac{1}{2} \tan 2A\right) + \tan^{-1}(\cot A) + \tan^{-1}(\cot^3 A) = 0.$$

GROUP B

1. Find the point of intersection of the lines

$$\frac{x}{a} + \frac{y}{b} = 1 \text{ and } \frac{x}{b} + \frac{y}{a} = 1.$$

Show that the three lines

$$5x + 3y - 7 = 0, 3x - 4y - 10 = 0 \text{ and } x + 2y + 0 \text{ meet in a point.}$$

2. Find the angle between the straight lines given by

$$ax^2 + 2hxy + by^2 = 0.$$

Find the condition that one of the lines

$$ax^2 + 2hxy + by^2 = 0.$$

may coincide with one of the lines

$$a'x^2 + 2h'xy + b'y^2 = 0.$$

3. Find the condition that the general equation of the second degree may represent two straight lines.

Show that the equation

$$abx^2 + (a^2 + b^2)xy + aby^2 + ab(a-b)(x-y) - a^2b^2 = 0$$

represents two straight lines which are equidistant from the origin.

4. Find the length of the tangent drawn from a given point (x_1, y_1) to the circle

$$x^2 + y^2 + 2gx + 2fy + c = 0.$$

The length of the tangent from (f, g) to the circle $x^2 + y^2 = b$ is twice the length of the tangent from (f, g) to the circle $x^2 + y^2 + 3x + 3y = 0$, show that

$$f^2 + g^2 + 4f + 4g + 2 = 0.$$

5. Find the equation of the tangent at any point (x_1, y_1) of the parabola $x^2 = 4ay$

Show that the locus of the point of intersection of two tangents to a parabola $y^2 = 4ax$, which are at right angles to each other, is the directrix.

6. Find the equation of the line joining two points on an ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, whose eccentric angles are given.

For a system of parallel chords of an ellipse, prove that the sum of the eccentric angles of the extremities of any chord is constant.

7. In a hyperbola, prove that the sum of the squares of two conjugate diameters is constant.

Prove that if a pair of conjugate diameters cut the hyperbola and its conjugate in P and D , then

$$CP^2 - CD^2 = \text{constant.}$$

where C is the centre of the system.

MATHEMATICS—PASS

Second Paper

GROUP A.

1. Define 'Differential Coefficient'. Interpret it geometrically and also as a rate-measurer.

Deduce from your definition the differential coefficient of $a \sin \frac{x}{a}$.

2. (1) Find $\frac{dy}{dx}$ where $y = x^x + x^{\frac{1}{x}}$.

(2) Prove that if $y = \sin (m \sin^{-1} x)$
 $(1 + x^2)y^2 = xy_1 - m^2 y.$

3. (1) Enunciate Stirling's Theorem.

(2) Expand e^{ax} in powers of x .

4. (1) Obtain the equation to the normal at any point of the curve $y = f(x)$.

(2) Find the condition that the conics

$$ax^2 + by^2 = 1, a'x^2 + b'y^2 = 1$$

shall cut orthogonally.

5. Obtain the pedal equation to the cardioid

$$r = a(1 + \cos \theta).$$

6. Show that the chord of curvature through the pole of the cardioid $r = a(1 + \cos \theta)$ is $\frac{4}{3}r$.

GROUP B.

1. Explain integration as summation with illustration.

2. Obtain the integrals of

$$\sqrt{a^2 - x^2}, \text{ see } x, \sqrt{\frac{1+x}{1-x}}, \frac{1}{\sqrt{a^2 - x^2}},$$

3. Integrate

$$\frac{1}{\sin x + \cos x}, \log x \frac{e^{ax} - 1}{1 + x^2},$$

4. In the cycloid

$$x = a(1 + \sin t)$$

$$y = a(1 - \cos t)$$

obtain the relation between s and ψ .

5. Obtain the area bounded by the curves

$$y^2 = 4ax, x^2 = 4ay.$$

6. Evaluate

$$\int \frac{x+1}{x^2+4x+5} dx, \int \frac{dx}{(x^2+a^2)(x^2+b^2)}, \int \frac{2x+3}{\sqrt{x^2+x+1}} dx.$$

$$(1) \quad xdx + ydy + \frac{xdy - ydx}{x^2 + y^2} = 0;$$

$$(2) \quad \cos^2 x \frac{dy}{dx} + y = \tan x;$$

$$(3) \quad (x^2 + y^2)dx - 2xydy = 3.$$

MATHEMATICS—PASS

Third Paper

GROUP A.

1. Define pressure at a point of a fluid in a given direction. Determine the pressure at any depth in a homogeneous liquid in contact with an atmosphere at rest.

Three fluids whose densities are in A. P. fill a semi-circular tube whose bounding diameter is horizontal. Prove that the depth of one of the common surfaces is double that of the other.

2. Find the centre of pressure of a circle wholly immersed with its plane vertical in a homogeneous liquid.

A regular hexagon is immersed in a homogeneous liquid with one side in the surface. Prove that the depth of its centre of pressure is to that of its centre of mass as 23 is to 18.

3. Find the resultant thrust on a solid wholly or partly immersed in a homogeneous liquid.

A closed cylinder, the diameter of whose base is equal to its length, is full of water and hangs freely by a string fastened to a point in its upper rim. Prove that, the weight of the cylinder being neglected, the vertical and horizontal components of the resultant thrust on its curved surface are each half the weight of the water.

4. Find the conditions of equilibrium of a solid floating freely in a fluid.

A square lamina is placed vertically in a fluid of double its density. Prove that it can rest only with an edge or diagonal vertical.

5. Prove that when a body floats in water, the weight of the body is equal to the weight of the water displaced.

A body floats in water under atmospheric pressure. If the atmosphere be removed will the body rise or sink? Give reasons.

6. Describe and explain the action of the siphon.

A cylindrical vessel with its axis vertical is filled with water, and is closed by a heavy piston of mass M . There is a small hole in the piston through which the water escapes. Show that the uniform velocity of efflux is

$$\sqrt{\frac{2gM}{\rho A}}$$

where ρ is the density of the fluid, and A is the area of the cross-section of the cylinder.

GROUP B.

1. Give experimental proof of the diurnal rotation of the earth.

If a person travelling eastward goes round the world, he will at the end of his journey appear to have gained a day. On the other hand, if he travel westward, he will appear to lose a day. Explain this.

2. Describe the adjustments for the collimation, level, and deviation errors in a transit instrument.

The zenith distances of a star at lower and upper culmination are z and z' . Find the latitude of the place and the declination of the star.

3. Explain, by means of a diagram, the phenomenon of the seasons.

Find the lowest latitude at which it is possible for twilight to last all night.

4. Explain the effect of annual parallax on a star. Determine by any method the annual parallax of a star.

Where must a star be situated so that the effect of parallax may be (i) nil, and (ii) the greatest?

5. Determine the least possible and the greatest possible number of eclipses in a year.

6. What is the equation of time? How does its magnitude vary throughout the year?

Show how to convert sidereal time into mean time, and vice-versa.

1929

MATHEMATICS—PASS

First Paper

GROUP A.

1. (i) Show that

$$\sin 5\theta = \sin \theta (5 - 20 \sin^2 \theta + 16 \sin^4 \theta).$$

(ii) Among all values of θ between 0 and π find that which makes $\sin \theta \cos (\beta - \alpha)$ greatest; β being a given angle between 0 and $\frac{\pi}{2}$.

2. In any triangle ABC prove that

$$(i) \cos A + \cos B + \cos C = 1 + \frac{r}{R},$$

$$(ii) \sin A + \sin B + \sin C = \frac{s}{R},$$

where r and R are the radii of the inscribed and circumscribed circles, and s the perimeter of the triangle.

3. (i) Find the sum to n terms of the series

$$\sin a - \sin 2a + \sin 3a \dots + (-1)^{n-1} \sin na.$$

- (ii) Sum to n terms the series

$$\sin a \sin 2a + \sin 2a \sin 3a + \sin 3a \sin 4a + \dots$$

4. (i) Find $\sin 18^\circ$ and $\sin 9^\circ$.

- (ii) Show that

$$\cos^2 18^\circ \sin^2 36^\circ - \cos 36^\circ \sin 18^\circ = \frac{1}{8}.$$

5. (i) Obtain the expansion of $\sin \theta$ in ascending powers of θ .

- (ii) Expand $\cos n^\circ$ in powers of n .

6. Solve

$$(i) \tan^{-1} \frac{1}{3} + 2 \tan^{-1} \frac{1}{5} + \tan^{-1} \frac{1}{8} + \tan^{-1} \frac{1}{x} = \frac{\pi}{4};$$

$$(ii) \sin^2 x + \sin^2 2x = 2.$$

7. (i) Show that

$$\sin^{-1} \sqrt{-1} = 2n\pi - i \log (\sqrt{2} - 1).$$

- (ii) Find all the values of $(1 + i)^{\frac{1}{3}}$.

GROUP B.

1. (i) Obtain the area of a triangle, when its three vertices are known.

(ii) Given the co-ordinates of the angular points of a triangle, find the equation to the line which joins the middle-points of two sides.

2. (i) Find the tangent of the angle between the two straight lines whose intercepts on the axes are respectively a, b , and a', b' .

- (ii) If the straight lines represented by the equation.

$$x^2 (\tan^2 \phi + \cos^2 \phi) - 2xy \tan \phi + y^2 \sin^2 \phi = 0,$$

make angles α, β with the axes of x , show that

$$\tan \alpha \sim \tan \beta = 2.$$

3. (i) Find the equation of the lines joining the origin to the common points of

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0,$$

and

$$lx + my + n = 0,$$

(ii) Show that the lines joining the origin to the points common to

$$3x^2 + 5xy - 3y^2 + 2x + 3y = 0,$$

$$\text{and} \quad 3x - 2y = 1$$

are at right angles.

4. Find the condition that the two circles

$$x^2 + y^2 + 2ax + c = 0$$

$$x^2 + y^2 + 2bx + c = 0$$

may cut each other at right angles. Show that the circles touch if

$$\frac{1}{a^2} + \frac{1}{b^2} = \frac{1}{c}$$

5. Find the polar of any point with respect to the parabola $x^2 = 4ay$.

Prove that the tangents drawn at the extremities of any focal chord of the parabola $y^2 = 4ax$ intersect on the directrix.

6. Find the condition that the line $lx + my + n = 0$ may touch the ellipse $ax^2 + by^2 = 1$.

Prove that the locus of the intersection of the tangent at any point of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, with the perpendicular on it from the focus is the auxiliary circle.

7. Show that the area of the parallelogram formed by the tangents at the ends of conjugate diameters of the hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ is constant.

Show also that the line joining the ends of conjugate diameters of the hyperbola is parallel to one asymptote and bisected by the other.

MATHEMATICS—PASS

Second Paper

1. (i) Find, from first principles, the differential co-efficient of $\sin^{-1} \frac{x}{a}$.

(ii) Given $y = x^x + (\sin x)^2$, find $\frac{dy}{dx}$.

2. (i) Enunciate and prove Leibnitz's Theorem.

(ii) If $y = x^4, e^{ax}$, find y^5 .

3. Obtain the locus of the foot of the perpendicular drawn from the origin on a tangent to the curve

$$\frac{x^m}{a^m} + \frac{y^m}{b^m} = 1.$$

4. (i) Show that the chord of curvature through the pole for the curve $p = f(r)$ is given by $2p \frac{dr}{dp}$.

(ii) Show the chord of curvature through the pole of the equi-angular spiral $r = ae^{m\theta}$ is $2r$.

5. Investigate the following limiting forms.

$$\log \sin x \cos x$$

(i) $\text{Lt } x \rightarrow 0$ —————

$$\log \sin \frac{x}{2} \cos \frac{x}{2}$$

(ii) $\text{Lt } x \rightarrow \infty \frac{x^n}{e^x}$

6. Write down the integrals of

$$x \sqrt{x^2 + 1}, \tan^{-1} x, \sqrt{x^2 - a^2}, \operatorname{cosec} 2x.$$

7. Integrate

$$\int \frac{e^{m \tan^{-1} x}}{(1+x^2)^2} dx, \int \frac{x+1}{3+2x-x^2} dx, \int \frac{x^2+x+1}{\sqrt{x^2+2x+3}} dx.$$

8. (i) Explain how we can obtain the intrinsic equation to a curve from the polar.

(ii) Find the intrinsic equation to the Cardioid

$$r = a(1 \cos \theta).$$

9. Obtain the total area of the 3 loops of the curve

$$r = a \sin 3\theta.$$

10. Solve :

$$(i) \frac{dy}{dx} + \frac{y^2+y+1}{x^2+x+1} = 0$$

$$(ii) \frac{dy}{dx} + \frac{y}{x} = \frac{y^2}{x^2}$$

$$(iii) \sec^2 y \frac{dy}{dx} + 2x \tan y = x^2.$$

MATHEMATICS—PASS

Third Paper

GROUP A

1. Define a fluid.

Prove that the common surface of two liquids that do not mix is a horizontal plane.

Prove also that if two liquids that do not mix together meet in a bent tube, heights of their upper surfaces above their common surface will be inversely proportional to their densities.

2. Prove that the whole pressure of liquid on a surface is equal to the weight of a column of liquid of which the base is equal to the area of the surface, and the height is equal to the depth of the centroid below the surface of the liquid.

A circular cylinder of height h and radius r , closed at both ends, is first filled with liquid, and its axis is inclined at 45° to the vertical. Find the whole pressure on the curved surface.

3. Define the centre of pressure of the plane area immersed in a liquid.

Calculate the depth of the centre of pressure of a rectangle placed vertically in a liquid with one side in the surface, the atmospheric pressure on the surface being neglected. Show how the position of the centre of pressure will be affected when the atmospheric pressure on the surface is taken into account.

4. A substance, whose density is p , is weighed by means of weights the density of which is p ; if ρ be the density of the air, find the true weight corresponding to any apparent weight.

Show that the true weight would be greater than the apparent weight if $p' > p$.

5. Obtain the conditions of equilibrium of a body floating freely in a liquid.

A sphere of ice floats in water and gradually melts, retaining its spherical shape. Does its centre rise or sink?

5. Describe and explain the action of a siphon.

Water is being transferred from one vessel into another by the action of a siphon. Show that the centre of gravity of the entire liquid descends.

GROUP B.

1. What is a circumpolar star? Show that the altitude of a circumpolar star is greatest or least when the star is on the meridian.

Define the latitude of a place, and show how it can be determined by the observations of the transits of a circumpolar star over the meridian.

2. Explain the effect of aberration on the position of a star.

Show that the effect of aberration on a star situated at the pole of the ecliptic is to cause it to describe a small circle round its true position in the course of a year.

3. Explain the phenomenon of the seasons.

Explain the heat of June, and how the mean temperature is higher in August than in June.

4. Explain what is meant by twilight. Find the duration of twilight at the equator during the equinoxes.

Find the lowest latitude at which it is possible for twilight to last all night.

5. Define horizontal parallax. Explain the effect of parallax of a heavenly body. The moon's horizontal parallax being $57' 6''$ find its true altitude corresponding to an observed altitude of 60° .

6. What is the equation of time? Show that it vanishes four times a year.

On a certain day the sun rises at 6 h. 56m. and sets at 4h. 32 m. mean time find the equation of time for that day.

1930

MATHEMATICS—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable

All the questions are of equal value.

You are not permitted to attempt more than eight questions, which carry full marks, and not more than four from the same group.

GROUP A.

1. In a plane triangle, with the usual notation, prove that

$$\text{area} = \frac{1}{2} bc \sin A = \frac{abc}{4R}$$

Deduce that

$$4 \cos \frac{A}{2} \cos \frac{B}{2} \cos \frac{C}{2} = \frac{S}{R}.$$

2. Prove that

$$\cos 15^\circ = \frac{\sqrt{3}+1}{2\sqrt{2}}.$$

and find *all* the angles between 0° and 2π which satisfy the equation
 $\frac{1}{4} \cos^2 \theta \sqrt{2} \cos \theta = 1.$

3. Prove that

$$\tan^{-1} \frac{1}{7} + 2 \tan^{-1} \frac{1}{3} = \frac{\pi}{4}.$$

Solve

$$\tan^{-1} 2x + \tan^{-1} 3x = \frac{\pi}{4}$$

4. State fully De Moivre's Theorem. Find all the roots of $x^7 = 1$ by the help of De Moivre's Theorem.

5. Obtain expansions of $\sin \theta$ and $\cos \theta$ in ascending powers of θ .

6. Sum to n terms

$$(i) \sin a + \sin (a + \beta) + \sin (a + 2\beta) + \dots$$

$$(ii) \cos^2 a + \cos^2 3a + \cos^2 5a + \dots$$

7. Reduce $(a + i\beta)x + iy$ to the form $A + iB$.

GROUP B.

1. Show how to transform from polar coordinates to rectangular Cartesian coordinates, and *vice versa*.

Find the area of a triangle in polar coordinates, the vertices being $(0, 0)$, (ρ, θ) , (ρ^1, θ^1) , and transform the result to rectangular Cartesian coordinates.

2. Find the equation to the straight line which passes through the intersection of the straight lines

$$2x + 3y + 4 = 0 \text{ and } 3x + 4y - 5 = 0,$$

and is perpendicular to the straight line

$$6x - 7y + 8 = 0.$$

3. Find the condition that

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$$

may represent two straight lines.

Prove that those two straight lines will be parallel if $h^2 = ab$.

4. Show that every equation of the form

$$x^2 + y^2 + 2gx + 2fy + c = 0,$$

always represents a circle in rectangular coordinates. Find its centre and radius.

5. Show that the line

$$y = mx + \frac{a}{m}$$

always touches the parabola

$$y^2 = 4ax.$$

Find the coordinates of the points of intersection of the two tangents

$$y = mx + \frac{a}{m} \text{ and } y = m^1x + \frac{a}{m^1}$$

and deduce the condition that this point of intersection may lie on the latus-rectum.

6. Show that the eccentric angles at the ends of a pair of conjugate diameters of an ellipse differ by a right angle.

Show also that the sum of the squares of two semi conjugate diameters of an ellipse is constant.

7. Show that the equation of a hyperbola, referred to the asymptotes as axes, is of the form $xy = K^2$.

Show that the area of a triangle formed by the two asymptotes and any tangent is constant.

MATHEMATICS—PASS

Second Paper

Candidates are required to give their answers in their own words as far as practicable.

Seven questions carry full marks, but you are not permitted to attempt more than four questions from each group.

GROUP A.

1. Define the terms : limit, function, and differential coefficient.

Find, from first principles, the differential coefficient of $e \sin$

$\frac{x}{a}$, where a is a constant

2. Find $\frac{dy}{dx}$ if

$$(i) \quad y = \tan^{-1} \frac{2x}{1-x^2}, \quad \bullet$$

$$(ii) \quad x^3 + x^4 + y^3 = 0;$$

$$(iii) \quad y = \tan x + \sec x.$$

3. State and prove Taylor's theorem.

Expand $e^{\sin x}$ in powers of x .

4. (i) Find the pedal equation of the curve $r^n = a^n \cos n\theta$.

(ii) Find the condition that the conics

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1, \quad \frac{x^2}{c^2} + \frac{y^2}{d^2} = 1$$

shall cut orthogonally.

5 (i) Obtain an expression for the radius of curvature in Cartesian coordinates.

(ii) For the curve $r = a(1 + \cos \theta)$, show that

$$3\rho = 2\sqrt{2ar}.$$

6. (i) Find the maximum and minimum values of

$$(x-1)(x-2)^3.$$

(ii) Find $\lim_{x \rightarrow \infty} 2^x \sin \frac{a}{2^x}$.

GROUP B.

1. Define integration as the limit of a sum.

$$\text{Evaluate} \quad \int_0^{\frac{\pi}{2}} \sin x \, dx$$

from first principles.

2. Find the integrals of

$$\sqrt{a^2 + x^2}, \quad \frac{xe^x}{(x+1)^2}, \quad \frac{\cot x}{\log \sin x}.$$

3. Integrate

$$\frac{1}{ax^2 + bx + c}, \quad \frac{1}{\sin x + \cos x}, \quad \frac{1}{x(x+1)(x-1)}.$$

4. For the curve $y = c \cosh \frac{x}{c}$, prove that

$$cp = c^2 + s^2$$

the arc being measured from the vertex.

5. (i) Obtain the area bounded by a parabola and its latus rectum.
 (ii) Calculate the area bounded by the cardioid

$$r = a(1 + \cos \theta).$$

6. (i) Find the Cartesian equation of the curve whose subtangent is constant.

(ii) Find the curve for which the Cartesian subnormal varies as the square of the radius vector.

7. Solve :

(i) $\frac{dy}{dx} + xy - x = 0.$

(ii) $(x^2 + y^2) \frac{dy}{dx} = xy.$

(iii) $\frac{d^2y}{dx^2} - 3 \frac{dy}{dx} + 2y = 0$

MATHEMATICS—PASS

Third Paper

Any six questions carry full marks ; but not more than four from each group should be attempted

GROUP A

1. (i) Find the specific gravity of a mixture of given weights of different substances whose specific gravities are given.

(ii) When equal volumes of two substances are mixed the specific gravity of the mixture is 4; when equal weights of the same substances are mixed, specific gravity of the mixture is 3. Find the specific gravity of the substances.

2. (i) Show that the common surface of two heavy homogeneous liquids, which do not mix, is a horizontal plane.

(ii) In the lower half of a uniform circular tube, one quadrant is occupied by a liquid of density 2ρ and the other by two liquids which do not mix, of densities 3ρ and ρ . Prove that the volume of the lower of the two latter liquids is twice that of the other.

3. Define 'whole pressure'.

A cone, full of water, is placed on its side on a horizontal table. Show that the thrust on its base is $3 \sin a$ times the weight of the contained fluid, where $2a$ is the vertical angle of the cone.

4. (i) Write down the conditions of equilibrium of a body freely floating in a liquid.

(ii) A ship sailing from the sea into a river sinks a inches and on discharging x tons of her cargo rises b inches. If sea water be one-fortieth times heavier than river water, prove that the mass of the ship is $41\frac{a}{b}x$ tons.

5. (i) Describe a 'Nicholson's Hydrometer'. What are its uses? What is its chief point of difference from a common hydrometer?

(ii) A Nicholson's hydrometer weighs 8 oz. The addition of 2 oz. to the upper pan causes it to sink in one liquid to the marked point, while 5 oz. are required to produce the same result in another liquid. Compare the specific gravities of the liquids.

6. (i) Enunciate Boyle's Law. How would you verify it experimentally? What is a 'perfect gas'?

(ii) A small quantity of air introduced into the upper part of a barometer tube depresses the mercury considerably, whilst a small portion of iron floating on the mercury hardly depresses it at all. Explain.

GROUP B.

1. (i) Define—celestial meridian, prime vertical, altitude, zenith distance, right ascension, celestial longitude.

(ii) Show that the altitude of a star is greatest when on the meridian.

(iii) What point in the heavens has its declination, right ascension, latitude and longitude each equal to zero?

2. (i) Show that the altitude of the celestial pole at any place is equal to the latitude of the place.

(ii) Attempt a proof of the earth's rotation from falling bodies.

(iii) Find the highest latitude north or south at which it is possible to see the sun in the zenith at noon.

3. (i) Show that the duration of twilight at any place depends upon the latitude of the place and declination of the sun.

(ii) Find the duration of twilight at the Equator during the equinoxes.

(iii) Find the lowest latitude at which it is possible for twilight to last all night.

4. Describe Flamsteed's method of finding the right ascension of a star.

What are the merits of the method ?

5. (ii) Explain the phenomenon of the 'harvest moon'.

(ii) What do you know about the lunar atmosphere ?

6. (i) Define 'equation of time'. What are its causes ?

(ii) Given that the sun rose on a certain date at 6 h, 54 m. a. m. and set at 4 h. 33 m. p. m. find by how much the length of the morning exceeds the length of the after-noon.

1931

MATHEMATICS—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable.

You are not permitted to attempt more than seven questions which carry full marks, and not more than four from the same group.

All the questions are of equal value.

GROUP A.

1. (1) If $A + B + C = 180^\circ$, prove that

$$\cos A + \cos B + \cos C = 1 + 4 \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}.$$

(ii) Express $\cos 5\theta$ in terms of $\cos \theta$.

2. (i) If r, r_1, r_2, r_3 be the radii of the inscribed and escribed circles of a triangle, show that.

$$\frac{1}{r} = \frac{1}{r_1} + \frac{1}{r_2} + \frac{1}{r_3}.$$

(ii) Prove that in any triangle, the area of the inscribed circle is to the area of the triangle as π is to

$$\cot \frac{A}{2} \cot \frac{B}{2} \cot \frac{C}{2}.$$

3. Solve :

$$(i) \tan^{-1} \frac{1}{3} + \tan^{-1} \frac{1}{5} + \tan^{-1} \frac{1}{7} x = \frac{\pi}{4};$$

$$(ii) 2 \sin^2 x + \sin^2 2x = 2.$$

4. (i) Find the sum of the sines of a series of angles which are in A. P.

(ii) Find the sum of n terms of the series.

$$\sin^2 \alpha + \sin^2 (\alpha + \beta) + \sin^2 (\alpha + 2\beta) + \dots$$

5. (i) Prove De Moivre's Theorem for an integral index.

(ii) Find the values of $(1-i)^{1/7}$

6. (i) Expand $\cos \theta$ in ascending powers of θ .

(ii) Obtain an expansion of θ in powers of $\tan \theta$.

7. (i) Given $\sin x = n \sin (x + \alpha)$, obtain an expansion of x in powers of n .

(ii) Reduce $\cos (\theta + \phi i)$ to the form of $a + \beta i$.

GROUP B.

1. (i) Show how to transform from polar coordinates to rectangular coordinates and *vice versa*.

(ii) Transform to Cartesian coordinates the equation

$$r (\cos 3\theta + \sin 3\theta) = 5k \sin \theta \cos \theta.$$

2. (i) Show that any equation of the first degree in x and y always represents a straight line.

(ii) Find the equation to the straight line drawn at right angles to the straight line.

$$\frac{x}{a} - \frac{y}{b} = 1.$$

through the point where it meets the axis of x .

3. (i) Find the angle between the straight lines given by

$$ax^2 + 2hxy + by^2 = 0.$$

(ii) Find the angle between the lines joining the origin to the points common to.

$$3x^2 + 5xy - 3y^2 + 2x + 3y = 0,$$

and

$$3x - 2y = 1.$$

4. (i) Find the equation of the circle which is described on the line joining the points (x_1, y_1) , and (x_2, y_2) as diameter.

(ii) Find the equation of the circle which touches the axes at (0, 1) and (1, 0).

5. (i) Obtain the equation of the normal to the parabola $y^2 = 4ax$ in the form.

$$y + mx = 2am + am^3$$

(ii) Find the equation to the chord of a parabola which is bisected at the point (h, k) .

6. (i) Find the equation of the line joining two points on the ellipse.

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1,$$

whose eccentric angles are given.

(ii) Find the condition that (x', y') and (x'', y'') may be the extremities of a pair of conjugate diameters of the ellipse

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1.$$

7. (i) Show that the area of the parallelogram formed by the tangents at the ends of conjugate diameters of the hyperbola.

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$$

is constant.

(ii) Show that the portion of a tangent to a hyperbola intercepted between the asymptotes is bisected at the point of contact.

MATHEMATICS—PASS

Second Paper

Seven questions carry full marks, of which three must be from GROUP A and four from GROUP B.

GROUP A.

1. (i) Define the following terms :—variable, dependent variable, infinitesimal, and limiting value.

(ii) If the area of a circle increase at a uniform rate show that the rate of increase of the perimeter varies inversely as the radius.

2. Find $\frac{dy}{dx}$ when

(i) $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$;

(ii) $y = a(1 - \cos t)$, $x = a(t + \sin t)$;

(iii) $y = (\sin x)^x$.

3. If $y = \tan (m \tan^{-1} x)$, show that

$$(1+x^2) \frac{dy}{dx} = m(1+y^2),$$

and prove that the first three terms in the Maclaurin series for y are

$$mx + m(m^2 - 1) \frac{x^3}{3} + m(m^2 - 1)(2m^2 - 3) \frac{x^5}{5}.$$

4. (i) Prove that

$$\tan \phi = \frac{x - \frac{dy}{dx} - y}{x + y \frac{dy}{dx}},$$

where ϕ is the angle which the tangent to a curve makes with the radius vector drawn from the origin.

(ii) If $\lim_{x \rightarrow 0} \frac{\sin 2x + a \sin x}{x^2}$ be finite, find the value of a and

5. Find the pedal equation of the parabola

$$y^2 = 4a(x+a).$$

Show that the chord of curvature through the focus of the parabola is four times the focal distance of the point.

GROUP B.

6. If $\phi(x) = \frac{d}{dx} \{\psi(x)\}$, prove that

$$\lim_{h \rightarrow 0} h \{ \phi(a) + \phi(a+h) + \phi(a+2h) + \dots + \phi(b) \} = \psi(b) - \psi(a).$$

Deduce that

$$\lim_{n \rightarrow \infty} \left\{ \frac{1}{n} + \frac{1}{n+1} + \frac{1}{n+2} + \dots + \frac{1}{n+n-1} \right\} = \log 2.$$

7. Integrate

$$(i) \frac{1}{(x^2+a^2)(x^2+b^2)}, \quad (ii) \frac{\cos 2x}{\cos x}, \quad (iii) \frac{1}{\sqrt{x^2+x-2}}$$

8. Show that

$$(i) \int_a^b \frac{\log x}{x} dx = \frac{1}{2} \log \left(\frac{b}{a} \right) \log(ab);$$

$$(ii) \int_0^a \sin^{-1} \frac{2t}{1+t^2} dt = 2a \tan^{-1} a - \log(1+a^2).$$

9. Find the intrinsic equation of the curve for which the length of the arc measured from the origin varies as the square of the ordinate. Also obtain the Cartesian co-ordinates of any point on the curve in terms of any parameter.

10. If s be the length of the curve

$$r = a \tan h \frac{\theta}{2}$$

between the origin and $\theta = 2\pi$, and A the area between the same points, show that $A = a(s - a\pi)$.

11. (i) Prove that if the angle between the tangent and the radius vector is one-half the vertical angle θ , the curve is the cardioid $r = a(1 - \cos \theta)$.

(ii) Prove that if the subnormal bears a constant ratio to the abscissa, the curve is a conic. Determine the particular conic which passes through $(1, 1)$.

12. Solve :

$$(i) \frac{d^2y}{dx^2} - 7 \frac{dy}{dx} + 12y = 1 ;$$

$$(ii) (1 - x^2) \frac{dy}{dx} - xy = 1 ;$$

$$(iii) (x^2 - y^2) \frac{dy}{dx} = 2xy.$$

MATHEMATICS—PASS

Third Paper

Any six questions carry full marks.

1. (i) Define—'perfect fluid', 'density', 'specific gravity', 'fluid pressure at a point'.

(ii) Describe Bramah's hydraulic press, enunciating the hydrostatic principle which is utilized in it. It is practicable to multiply the effort indefinitely ?

2 (i) A closed hollow vessel in the shape of a right circular cone with a base which is horizontal and downwards : water is poured into it through a small hole at the vertex till the vessel is full. Find the pressure at any point of the base and show that the total pressure on the base is three times the weight of the water contained, if the atmospheric pressure be neglected.

(ii) If a parallelogram be immersed in any manner in a homogeneous liquid, prove that the sum of the pressures at the extremities of each diagonal is the same.

3. (i) If a surface (which is such that no vertical line cuts it in more than one point) be in contact with fluid at rest under gravity, show that the resultant vertical thrust is equal to the superincumbent fluid and acts through the centre of gravity of the superincumbent fluid.

(ii) A right circular cylinder is just immersed in water with its axis horizontal. Compare the vertical thrusts on the two parts of the curved surface into which it is divided by the horizontal plane through the axis.

4. (i) Write down the conditions of equilibrium of a body floating under the action of gravity alone.

(ii) A body is weighed, by means of a spring balance, in air and in water and its apparent weights are found to be W_1 and W_2 respectively. Find its true weight if the specific gravity of air be s .

5. (i) Establish the relation $pV \propto T$ (for a gas) where T is the absolute temperature.

(ii) The constants k_1 and k_2 denote the values of k' in the formula $p = k\rho$ for two cases. Given masses m_1 and m_2 of the first and the second gas are mixed at the same temperature. Prove that the value of the constant k for the mixture is

$$\frac{m_1 k_1 + m_2 k_2}{m_1 + m_2}$$

6. How would you find the specific gravity of a solid which is lighter than water with the help of a hydrostatic balance? How would you proceed if the solid melts in or reacts chemically with water?

1932

MATHEMATICS—PASS

First Paper

Only seven questions to be attempted, of which not more than four to be selected from the same group.

GROUP A

1. In any triangle

(i) if $\cos A = \frac{\sin B}{2 \sin C}$, prove that the triangle is isosceles;

- (ii) Prove that
 $a \sin (B-C) + b \sin (C-A) + c \sin (A-B) = 0$.
2. With the usual notation, establish the following :
 (i) $S = \sqrt{4s(s-a)(s-b)(s-c)}$;
 (ii) $r_1 + r_2 + r_3 = r + 4R$.
3. (i) Show that
 (1) $\tan (2 \tan^{-1} \alpha) = 2 \tan (\tan^{-1} \alpha + \tan^{-1} \alpha^3)$;
 (2) $\tan^{-1} \frac{1}{5} + \tan^{-1} \frac{1}{8} + \tan^{-1} \frac{1}{10} + \tan^{-1} \frac{8}{21} = \frac{\pi}{4}$.
 (ii) Solve the equation $3 \sin \theta + 2 \cos^2 \theta = 0$.
4. (i) State De Moivre's Theorem *completely* and establish it for a real, positive, integral index.
 (ii) Find the three cube roots of $1 + \sqrt{-1}$.
5. (i) If θ lies between $-\frac{\pi}{4}$ and $+\frac{\pi}{4}$, prove that

$$\theta = \tan \theta - \frac{1}{3} \tan^3 \theta + \frac{1}{5} \tan^5 \theta - \dots$$

 (ii) Sum the series

$$\sin \alpha + \sin \left(\alpha + \frac{\pi}{n} \right) + \sin \left(\alpha + \frac{2\pi}{n} \right) + \dots \text{to } n \text{ terms,}$$
6. Express $(a+b)p+iq$ in the form $A+iB$, where a, b, p, q are all real. Hence determine the condition that the given expression may be real.
7. (i) Establish the exponential value of $\cos \theta + i \sin \theta$, and from it deduce the exponential value of $\cos \theta$ and $\sin \theta$ respectively.
 (ii) Prove that $i^i = e^{-\left(\frac{1}{2}\pi\right)}$

GROUP B

8. Find an expression for the distance between two points whose rectangular Cartesian coordinates are (x_1, y_1) and (x_2, y_2) respectively.

Show that the points (a, a) , $(-a, -a)$, $(-a\sqrt{3}, a\sqrt{3})$ are the vertices of an *equilateral* triangle, the axes being rectangular.

9. Obtain the condition that the straight lines (axes rectangular).

$$\begin{aligned} ax + by + c &= 0 \\ a'x + b'y + c' &= 0 \end{aligned}$$

may be mutually at right angles.

Find the equation of the straight line through the intersection of $x+2y=0$ and $y+4x+7=0$, which is perpendicular in the straight line $3x-y=0$.

10. Determine the value of c for which the equation $2x^2 - y^2 + xy - 2x - 5y + c = 0$ will represent a pair of straight lines.

Obtain the coordinates of their point of intersection.

11. Find the equation of the tangent at any point (x', y') on the circle $x^2 + y^2 = a^2$.

Show that the circles $x^2 + y^2 - 4x + 6y + 8 = 0$ and $x^2 + y^2 - 10x - 6y + 14 = 0$ touch at the point $(3, -1)$.

12. Obtain the equation of the parabola whose focus is at the point $(-1, 1)$ and whose directrix is the straight line $x + y + 1 = 0$.

Show that the chord $4x + 3y + 1 = 0$ of the parabola $y^2 = 8x$ is bisected at the point $(2, -3)$.

13. Show that the line $y = \mu x + \sqrt{a^2 \mu^2 + b^2}$ will touch the ellipse $x^2/a^2 + y^2/b^2 = 1$ for all values of μ .

An ellipse slides between two straight lines mutually at right angles. Show that the locus of its centre is a circle.

14. Find the equation of a hyperbola referred to its two asymptotes as axes.

Prove that the chords of a hyperbola which touch the conjugate hyperbola are bisected at their points of contact.

MATHEMATICS—PASS

Second Paper

Seven questions carry full marks, viz. three from Group A and four from Group B.

GROUP A

1. Find, from first principles, the differential coefficient of $\tan \frac{x}{a}$.

Differentiate

(i) x^{x^2} : (ii) $\sin^{-1} \frac{2x}{1+x^2}$.

2. State and prove Leibnitz' Theorem.

If $y = x^4 \log x$, find y^n .

3. State Maclaurin's Theorem for the expansion of $f(x)$ in powers

of x . Assuming the possibility of such expansion, prove the theorem without assuming Taylor's Theorem.

Expand $\tan x$ in ascending powers of x (up to the third term).

4. Prove that the subtangent is of constant length at any point on the curve

$$\log y = x \log a ;$$

and that the subnormal is constant at any point on the parabola $y^2 = 4ax$.

5. (i) Find the limiting value of $\frac{x - \sin x}{x^3}$, when $x = 0$.

(ii) Find the radius of curvature at any point on a parabola of latus rectum $4a$.

GROUP B

6. Find the integrals of

$$\sqrt{a^2 - x^2}, \frac{\cos 2x}{\sin x^2}, \frac{2+x^2}{1-x^2}.$$

7. Show that

$$(i) \int_0^1 \frac{\sin^{-1} x}{\sqrt{1-x^2}} dx = \frac{\pi^2}{8};$$

$$(ii) \int_{\alpha}^{\beta} \sqrt{\beta-x}(\beta-x) dx = \frac{\pi}{8}; (\beta-\alpha)^{\frac{3}{2}};$$

$$\int_0^{\pi} \log \tan x dx = 0.$$

8. (i) Find the equation to the curve at every point of which the Cartesian subtangent is twice the abscissa, and which passes through (8, 4).

(ii) Find the general equation of the curve at every point of which the polar subnormal is $2a$.

9. (i) Find the length of the arc of the equiangular spiral $r = \theta \cot a$ between two radii vectors r^1 and r^2 .

(ii) Find the intrinsic equation of the cycloid

$$x = a (\theta + \sin \theta),$$

$$y = a (1 - \cos \theta);$$

the arc being measured from the origin.

10. Find the area of a loop of

$$(i) x^4 + y^4 = 2a^2 xy ;$$

$$(ii) r^2 = a^2 \cos 2\theta.$$

11. Solve

(i) $x(y-x)\frac{dy}{dx} = y^2;$

(ii) $\frac{d^2y}{dx^2} - 5\frac{dy}{dx} + 6y = 0;$

(iii) $x\frac{dy}{dx} + y = x^3.$

MATHEMATICS—PASS

Third Paper

GROUP A

Any six questions carry full marks; but not more than four from either group should be attempted.

1. Prove that the surface of separation between two fluids of different densities is a horizontal plane.

An isosceles triangle is immersed vertically in a fluid with its vertex coincident with the surface of the fluid and its base horizontal; determine how it must be divided by a line parallel to the base, that the pressures upon the upper and lower portions may be respectively in the ratio of $m : n$.

2. Define the centre of pressure of a plane area immersed in a liquid.

Find the centre of pressure of a parallelogram immersed in a liquid with one angular point in the surface and one diagonal horizontal.

3. Obtain the conditions of equilibrium of a body floating freely in a liquid, and prove that a solid cannot float in a liquid of less density than its own.

A right circular cylinder floats in water with its axis vertical, half of its axis being immersed; assuming the specific gravity of the air to be s , find that of the cylinder.

4. Find the specific gravity of a mixture of substances of given weights and specific gravities.

Prove that the specific gravity of a mixture of given substances is greater when equal volumes are taken than when equal weights are taken.

5. Enunciate Boyle's Law, and show how it can be verified experimentally.

A heavy sphere is placed in a vertical cylinder, filled with atmospheric air, which it exactly fits. Find the density of the air in the cylinder when the sphere is in a position of permanent rest.

6. Describe the Common Pump and its action.

Find the height the water rises in one stroke of the piston.

GROUP B

7. Define—ecliptic, declination, right ascension, celestial longitude, hour angle.

Prove that the altitude of the celestial pole at any place is equal to the latitude of the place. Prove that the altitude of a star is greatest when on the meridian.

8. Describe the transit instrument, and explain how it is corrected for the various errors to which its readings are subject.

Two stars culminate at the same time and the angular distance between them is 10° . If the declination of one of them is twice that of the other, find their declination.

How do you find the pole by observation of the transits of a circumpolar star?

9. Explain the phenomenon of the seasons.

Explain how the average amount of heat derived from the sun each day in summer is greater than in winter, and further how the mean temperature is higher in August than in June, and lower in February than in December.

10. Enumerate the different causes which produce an apparent change in the position of a body, and explain the change produced in each case.

Where must a star be situated so as to have no displacement due to annual parallax? Where must it be situated so that the effect of annual parallax may be greatest?

The apparent altitude of a star due to refraction is 30° ; calculate the true altitude, the coefficient of refraction being $53'2''$.

11. State the cause of a solar eclipse, and explain under what circumstances it is (i) total, (ii) partial, (iii) annular.

Determine the frequency of eclipses both of the sun and of the moon, and find the least possible number as also the greatest possible number of them at a particular place in the whole year.

12. Define the 'equation of time', and state from what causes it arises. What is the greatest value? How many times in the year does it vanish, and at what dates?

The times of sunrise and sunset on November 1 are found from the tables to be 6 h. 56 m. and 4 h. 32 m. respectively. Find approximately the equation of time.

1933

MATHEMATICS—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable.

GROUP A

1. (i) Find the general values of θ which satisfy the equation $\sin \theta + 2 \cos \theta = 1$.

(ii) Calculate the limiting value of

$$\frac{\tan 2\theta - 2 \tan \theta}{\theta^3}$$

when $\theta \rightarrow 0$.

2. (i) If $A + B + C = \pi$ and $\cos A = \cos B \cos C$, prove that $\cot B \cot C = \frac{1}{2}$.

(ii) If A, B, C are the angles of a triangle, show that $2 \cot A + 2 \cot B + 2 \cot C$ is never less than

$$\operatorname{cosec} A + \operatorname{cosec} B + \operatorname{cosec} C.$$

3. (i) With the usual notation, establish the following :

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R.$$

(ii) Obtain the expression for the radius r of the inscribed circle in the form

$$r = 4R \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}.$$

4. (i) Prove that for all real values of m ,

$$\cos m\theta + i \sin m\theta$$

is a value of $(\cos \theta + i \sin \theta)^m$.

(ii) If $x_r = \cos \frac{\pi}{2^r} + i \sin \frac{\pi}{2^r}$, prove that

$$x_1 \cdot x_2 \cdot x_3 \dots \text{ad. inf.} = -1.$$

5. (i) Find the value of $\tan (\tan^{-1} x + \cot^{-1} x)$.

(ii) Solve

$$\tan^{-1}(x-1) + \tan^{-1} x + \tan^{-1}(x+1) = \tan^{-1} 3x.$$

6. (i) Find the sum of the following n terms :

$$\tan x + \frac{1}{2} \tan \frac{x}{2} + \frac{1}{2^2} \tan \frac{x}{2^2} + \dots + \frac{1}{2^{n-1}} \tan \frac{x}{2^{n-1}}.$$

(ii) Deduce its value when n is indefinitely increased

7. Show that for all real values of θ

$$e^{i\theta} = \cos \theta + i \sin \theta.$$

Can you use this to prove that the circular functions are all periodic?

GROUP B

8. (i) Obtain the equation of the straight line joining the origin to the intersection of the straight lines $2x + 3y = 1$, $x - y = 2$.

(ii) A straight line moves so that the sum of the reciprocals of its intercepts on the axes is constant. Show that it passes through a fixed point.

9. (i) Calculate the angle between the two straight lines represented by $ax^2 + 2hxy + by^2 = 0$.

(ii) Show that the lines joining the origin to the points of intersection of $3x^2 + 3xy - 3y^2 + 2x + 3y = 0$ and $3x - 2y = 1$ are at right angles.

10. (i) What condition or conditions must be satisfied in order that the general equation of the second degree in rectangular Cartesian coordinates may represent a circle?

(ii) Show that the equation

$$(y - x + 3)^2 + 2(x - 2)(y + 2) = 0$$

represents a circle, of which $x = 2$ and $y + 2 = 0$ are two tangents. What is represented by $x - y = 3$?

11. (i) Show that the equation $y^2 = 2x + 3$ represents a parabola. Find its latus rectum and the coordinates of its focus.

(ii) Two equal parabolas have the same vertex and their axes are at right angles. Prove that they cut again at an angle $\tan^{-1} \frac{1}{2}$.

12. (i) Show that the straight line $y = mx + \frac{a}{m}$. Where m is a parameter, always touches a parabola.

(ii) Use this fact to find the locus of the point of intersection of two tangents of a parabola which make an angle α with one another.

13. (i) What are 'conjugate diameters' and the 'eccentric angle' of a point on a conic?

(ii) Prove that the eccentric angles of the extremities of any diameter differ by an odd multiple of π , but those of the extremities of two conjugate semi-diameters differ by an odd multiple of $\frac{\pi}{2}$.

14. (i) Find the equation of an hyperbola referred to any pair of conjugate diameters as axes of coordinates.

(ii) If the polar of a point (α, β) with respect to the parabola $y^2 = 4ax$ touches the circle $x^2 + y^2 = 4a^2$, prove that the point (α, β) lies on the rectangular hyperbola $x^2 - y^2 = 4a^2$.

MATHEMATICS—PASS

Second Paper

Candidates are required to give their answers in their own words as far as practicable.

GROUP A

1. Define the *differential coefficient* of a function $f(x)$ for $x = a$.

Find from the definition the differential coefficient of $\log \cos x$.

2. If $y = xe^{-x} \cos x$, then prove that

$$x^2 \frac{d^2 y}{dx^2} + 2x(x-1) \frac{dy}{dx} + 2(x^2 - x + 1)y = 0.$$

3. Enunciate Taylor's Theorem and apply it to obtain the Binomial Expansion.

$$(a+h)^n = a^n + {}^nC_1 a^{n-1} h + {}^nC_2 a^{n-2} h^2 + \dots + {}^nC_r a^{n-r} h^r + \dots + h^n.$$

Prove that

$$e^x \log(1+x) = x + \frac{x^2}{2!} + \frac{2x^3}{3!} + \frac{9x^5}{5!} + \dots$$

4. Prove that

$$\frac{d^n}{dx^n} (e^{ax} \sin bx) = r^n e^{ax} \sin (bx + n\phi),$$

where $r^2 = a^2 + b^2$, $\tan \phi = \frac{b}{a}$.

Find the fourth differential coefficient of $x^2 \sin 2x$.

5. Find a necessary condition for the existence of a maximum value of $f(x)$ at $x = a$.

Given the total surface $2\pi a^2$ of a right circular cylinder, find the cylinder of maximum volume.

6. Find the asymptotes of the curve

$$x^2y - xy^2 + xy + y^2 + x - y = 0;$$

and roughly trace the curve.

GROUP B

7. Evaluate

$$(i) \int \frac{\sin^{-1} x}{\sqrt{1-x^2}} dx; \quad (ii) \int \frac{7x-9}{x^2-2x+35} dx.$$

8. Integrate

$$(i) \int \frac{dx}{a+b \sin x}; \quad (ii) \int \frac{dx}{13+3 \cos x+4 \sin x}.$$

9. (i) If α be positive, that

$$\int_{-1}^{+1} \frac{dx}{\sqrt{1-2\alpha x+x^2}} = 2, \text{ if } \alpha < 1,$$

$$\text{or, } = \frac{2}{\alpha}, \text{ if } \alpha > 1;$$

$$(ii) \int_0^{\frac{1}{2}} \frac{dx}{(1-2x^2)\sqrt{1-x^2}} = \frac{1}{2} \log (2 + \sqrt{3}).$$

10. Find the area of the loop of the curve

$$y^2 = x(x-a).$$

11. A circle of radius a revolves about a tangent line; find the volume generated.

12. Solve any two of the following:

$$(i) \frac{dy}{dx} = \frac{y(x-2y)}{x(x-3y)}; \quad (ii) \frac{dy}{dx} + \frac{xy}{1-x^2} = x\sqrt{y};$$

$$(iii) \frac{d^2y}{dx^2} - 4 \frac{dy}{dx} + 3y = 0.$$

MATHEMATICS—PASS

Third Paper

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP A.

1. Prove that the pressure of a heavy homogeneous liquid at all points in the same horizontal plane is the same, and deduce that the surface of a heavy liquid at rest is horizontal.

Prove that if a parallelogram be immersed in any manner in a heavy homogeneous liquid, the sum of the pressures at the extremities of one diagonal is equal to the sum of the pressures at the extremities of the other diagonal.

2. Find the resultant thrust on any surface immersed in a heavy liquid.

Find the centre of pressure of a plane circle immersed in a vertical plane in a liquid.

3. Find the conditions of equilibrium of a body partly immersed in a liquid and supported by a string attached to some point of it.

A uniform rod capable of turning about one of its ends, which is out of water, rests inclined to the vertical with one-third of its length in water. Prove that its specific gravity is $\frac{5}{3}$.

4. Determine the specific gravity of a liquid with the aid of a Nicholson's Hydrometer.

Water is poured into a U-tube, the legs of which are 8 inches long, till they are half full. As much oil as possible is then poured into one of the legs. What length of the tube does it occupy, the specific gravity of the oil being $\frac{3}{4}$?

5. Find the difference in the altitude of two points by means of barometric readings.

The readings of a faulty barometer in which there is some air are α and β when the true readings are a and b . Find the true reading when the faulty barometer reads y .

6. Explain the action of the siphon, and find the conditions which must hold so that the siphon can act.

Explain the action of a hydrostatic machine which may be used for the purpose of pumping the air out of a vessel in which a vacuum is desired.

GROUP B.

7. Explain Foucault's pendulum experiments to prove the earth's rotation.

If a person travelling eastward go round the earth he will at the end of his journey appear to have gained a day. On the other hand, if he travel westward, he will appear to lose a day. Explain this.

8. Obtain the co-efficient of atmospheric refraction by Bradley's method.

The altitude of a star is observed, and found to be the angle whose sine is $\frac{1}{3}$. Calculate the true position of the star, assuming the amount of refraction at an altitude of 45° to be $58'2''$.

9. Find the duration of twilight at the equator during the equinoxes.

Show how the duration of twilight at any place at a time depends upon the latitude of the place and the declination of the sun.

What are the conditions that the twilight may last all night? Find the lowest latitude at which it is possible for twilight to last all night.

10. State Kepler's laws.

Deduce Kepler's third law from the law of gravitation.

If there be 378 days between two successive oppositions of Saturn, find the length of Saturn's year.

11. Determine the first point of Aries by Flamsteed's method, making the correction necessary owing to the precession of the equinoxes. What are the advantages of Flamsteed's method?

How do you determine the position of the ecliptic on the celestial sphere?

12. Explain the phenomenon of the Harvest Moon.

Obtain the height of a lunar mountain in the form $\frac{\delta^2}{2r \sin^2 \phi}$,

where δ is the projection of the distance between the bright summit of the mountain top and the line of separation of light and darkness on a plane perpendicular to the line of sight, r is the radius of the moon, and ϕ is the angle of elongation of the moon from the sun as seen from the earth.

1934

MATHEMATICS—PASS

First Paper.

Only six questions to be attempted, of which not more than three to be selected from the same group.

GROUP A

1. (i) Solve the equation

$$\sin 2\theta \sec 4\theta + \cos 2\theta = \cos 6\theta.$$

- (ii) Show that if θ lies between 0 and π ,

$$\cot \frac{1}{2}\theta - \cot \theta > 2.$$

2. (i) If $A + B + C = \pi$, find the value of

$$\tan \frac{A}{2} \tan \frac{B}{2} + \tan \frac{B}{2} \tan \frac{C}{2} + \tan \frac{C}{2} \tan \frac{A}{2}$$

in the simplest form

- (ii) Prove that in a triangle ABC

$$4R \sin A \sin B \sin C = a \cos A + b \cos B + c \cos C.$$

3. (i) Solve a triangle having given two sides and the angle opposite to one of them, and illustrate by a figure the case when the solution is ambiguous.

(ii) In the above case, the area of one of the triangles is three times that of the other; show that if b be the greater of the given sides and a the less, $\frac{b}{a}$ is less than 2.

4. (i) Show that

$$\sin^{-1} \frac{a-c}{a+c} = 2 \sin^{-1} \sqrt{\frac{c}{a+c}}$$

is an odd multiple of $\frac{\pi}{2}$

- (ii) If $\cos^{-1} x + \cos^{-1} y + \cos^{-1} z = \pi$, prove that

$$x^2 - y^2 + z^2 + 2xyz = 1.$$

5. (i) Assuming De Moivre's Theorem when n is a positive integer, show that

$$\cos n\theta = \cos^n \theta - \frac{n(n-1)}{2} \cos^{n-2} \theta \sin^2 \theta + \dots$$

(ii) If $2 \cos \alpha = a + \frac{1}{a}$, $2 \cos \beta = b + \frac{1}{b}$, etc., prove that

$$2 \cos(\alpha + \beta + \gamma + \dots) = abc\dots + \frac{1}{abc\dots}.$$

6. (i) Find the sum of the following n terms :

$$\cos \alpha + \cos(\alpha + \beta) + \cos(\alpha + 2\beta) + \dots + \cos\{\alpha + (n-1)\beta\},$$

(ii) Find the sum of

$$\cos^3 \alpha + \cos^3(\alpha + \beta) + \cos^3(\alpha + 2\beta) + \dots + \cos^3\{\alpha + (n-1)\beta\}.$$

GROUP B.

7. (i) Show that every linear equation in x and y represents a straight line.

(ii) Given the vertical angle and the sum of the sides of a triangle, find the locus of a point where the base is cut in a given ratio.

8. (i) Find the equation of the straight lines bisecting the angles between the two straight lines

$$ax^2 + 2hxy + by^2 = 0.$$

(ii) Show that the angle between one of the lines given by $ax^2 + 2hxy + by^2 = 0$ and one of the lines $ax^2 + 2hxy + by^2 + \lambda(x^2 + y^2) = 0$ is equal to the angle between the other two lines of the system.

9. (i) Find the equation of a circle in rectangular co-ordinates passing through three given points, viz.

$$x_1, y_1; x_2, y_2; x_3, y_3.$$

(ii) Show that the circle $x^2 + y^2 - 2ax - 2ay + a^2 = 0$ touches the axes of x and y , and find the chord of contact.

10. (i) Find the locus of the middle points of a system of parallel chords of a parabola.

(ii) How many chords may be drawn through a given point inside a parabola so as to be bisected at that point? Give reason for your answer.

11. (i) Show that the straight line

$$y = mx + \sqrt{a^2 m^2 + b^2}$$

always touches an ellipse, m being a parameter,

(ii) Use this fact to find the loci of the point of intersection of two tangents to an ellipse, which are at right angles to one another.

12. (i) Find the equation of a hyperbola when referred to its asymptotes as axes of coordinates.

(ii) Prove that the area of the triangle cut off from the asymptotes by a tangent to a hyperbola is constant.

MATHEMATICS—PASS

Second Paper

Answer **seven** questions of which not more than **four** must be from one group.

GROUP A.

1. Find, from first principles, the differential coefficient of $\tan^{-1}x$.

If $v_n = \log v_{n-1}$, and $v_1 = \log x$, find $\frac{dv_n}{dx}$.

2. Explain what is meant by a partial differential coefficient of a function of two or more variables.

If $u = 3(ax + by + cz)^2 - (x^2 + y^2 + z^2)$,
and $a^2 + b^2 + c^2 = 1$,

find the value of $\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} + \frac{\partial^2 u}{\partial z^2}$.

3. State (without proof) Maclaurin's Theorem for the expansion of a function of x in ascending powers of x .

Expand $\int_0^x e \sin x \, dx$ in powers of x as far as x^4 .

4. Show that the length of an arc of the curve whose equation is $x = f(t)$, $y = f(t)$, where t is a parameter, is

$$\int \left\{ \left(\frac{dx}{dt} \right)^2 + \left(\frac{dy}{dt} \right)^2 \right\}^{\frac{1}{2}} dt.$$

Hence find the length of an arc of the cycloid

$$x = a(\theta + \sin \theta), \quad y = a(1 + \cos \theta).$$

5. Define the radius of curvature of a curve, and find its formula in rectangular Cartesian coordinates.

Find the radius of curvature and the coordinates of the centre of curvature at the point (3, 4) of the rectangular hyperbola $xy = 12$.

GROUP B.

6. Integrate :

$$\int \frac{(x^2 + 4)dx}{x^2 + 2x + 3^2} \quad (\text{ii}) \quad \int \sec x dx.$$

7. If the surface density of a circular disc bounded by $x^2 + y^2 = a^2$ be given to vary as the square of the distance from the y -axis, find the mass of the disc.

8. If u and v be functions of x , show that

$$\int u v dx = u \left(\int v dx \right) - \int \left(\int v dx \right) \frac{du}{dx} dx.$$

Evaluate $\int (\log x)^2 dx$.

9. From a fixed point A on the circumference of a circle of radius a , the perpendicular AN is let fall on the tangent at any other point P on it. Prove that the greatest area the triangle APN can have is $\frac{3}{8}\sqrt{3}a^2$.

10. Find the general solutions of the equations :

$$(i) \quad \frac{dy}{dx} + \frac{2}{x}y = x^2 ;$$

$$(ii) \quad (2x + 3y - 6) \frac{dy}{dx} = 6x - 2y - 7.$$

11. Solve the following :

$$(i) \quad \frac{d^2y}{dx^2} - 2 \frac{dy}{y \cdot x} - 3y = 0 ;$$

$$(ii) \quad \frac{d^2x}{dt^2} + \mu^2 x = 0 .$$

MATHEMATICS—PASS

Third Paper

GROUP A.

1. Prove that the pressure at any point of a fluid at rest is the same in all directions.

How much water must be added to 27 oz. of a salt solution whose specific gravity is 1.08 so that the specific gravity of the mixture may be 1.05 ?

2. Prove that the common surface of two heavy homogeneous liquids, which do not mixed, is a horizontal plane.

Find the whole pressure on any plane surface immersed in a liquid, and deduce the total thrust on each of the plane ends of circular cylinder, of height h and radius of base a , the middle point

of the cylinder, being at the depth e below the surface of the fluid, and its axis being inclined at an angle θ to the vertical.

3. A substance, whose density is δ , is weighed by means of weights, the density of which is δ' ? if δ be the density of the air, find an approximately true weight corresponding to any apparent weight.

A cylinder of wood whose weight is 15 lb. and length 3 ft. floats in water with its axis vertical and half immersed in water. It is depressed six inches more and tied by a string to the bottom of the vessel in which the water is contained. Find the tension of the string.

4. Find the centre of pressure of a triangle immersed in homogeneous liquid with one side in the surface.

Determine the specific gravity of a liquid with the aid of a common hydrometer.

5. Define a perfect gas.

Two volumes, v_1 , v_2 of different gases at different pressures p_1 and p_2 , are mixed together and put into a vessel of volume V ; find the resulting pressure, the temperature being constant.

The specific gravity of mercury is 13.6, and the barometer stands at 30 inches. A bubble of gas, the volume of which is 1 cubic inch when it is at the bottom of a lake 170 feet deep, rises to the surface. What will be the volume when it reaches the surface?

6. A diving bell is lowered into water. If no air be supplied from above, find the compression of the air inside the bell at a given depth a . Find also the amount of air at atmospheric pressure that must be forced in so that at this depth the water may not rise within the bell.

Explain the working of a force-pump in which a continuous stream may be obtained.

GROUP B.

1. What do you mean by the Zodiac?

Prove that the altitude of a star is greatest when on the meridian.

Prove that the altitude of the celestial pole at any place is equal to the latitude of the place.

Give a proof the earth's rotation from the experiment of letting a body fall from the top of a high tower.

2. Describe the transit instrument, and explain how it is

used, Explain how the instrument is corrected for the errors to which its readings are subject.

The zenith distances of a star at lower and upper culminations are found, after correcting for refraction, &c, to be $76^{\circ} 4'$ and $2^{\circ} 52' S$, respectively. Find the latitude of the place and the declination of the star.

3. Establish the law of refraction of a heavenly body, $x = K \tan z$, and find K when the latitude of the place of observation is known.

The meridian altitude of a circumpolar star are 20° and 30° and the corresponding corrections for refraction are $1'40''$ and $1'9''$; find the latitude of the place.

4. Explain the phenomenon of the seasons.

What effect would be produced upon the seasons if the earth's axis were in the place of the ecliptic, or were perpendicular to it?

How does the duration of twilight at a given place alter with the season of the year.

5. Explain the effect of parallax on a heavenly body.

This Sun's horizontal parallax being $8'' 8''$, find the true zenith distance corresponding to an observed zenith distance of 60°

Find the conditions for (i) a lunar and (ii) a solar eclipse.

6. State the causes to which the equation of time is due.

Establish : length of afternoon—length of morning = twice the equation of time.

Assuming the mean distance of Venus to be 0.72, that of earth being unity, find the periodic time of Venus.

1935

MATHEMATICS—PASS

First Paper

Only six questions, three from each group, to be attempted.

GROUP A

1. (i) Prove that

$$\tan \left(45^{\circ} + \frac{A}{2} \right) = \sqrt{\frac{1 + \sin A}{1 - \sin A}} = \sec A + \tan A.$$

(ii) Solve the equation

$$\sin m\theta + \sin n\theta = 0$$

2. (i) Prove that in a triangle ABC,

$$R = \frac{a}{2 \sin A} = \frac{b}{2 \sin B} = \frac{c}{2 \sin C},$$

$$r = (s-a) \tan \frac{A}{2} = (s-b) \tan \frac{B}{2} = (s-c) \tan \frac{C}{2},$$

$$r_1 = s \tan \frac{A}{2}.$$

(ii) Prove that

$$(r_1 - r)(r_2 - r)(r_3 - r) = 4 R r^2.$$

3. (i) Prove that

$$\tan^{-1} \sqrt{\frac{a(a+b+c)}{bc}} + \tan^{-1} \sqrt{\frac{b(a+b+c)}{ca}} + \tan^{-1} \sqrt{\frac{c(a+b+c)}{ab}} = \pi$$

(ii) Prove that

$$\tan^{-1} n + \cot^{-1} (n+1) = \tan^{-1} (n^2 + n + 1).$$

4. (i) Find the sum of the sines of a series of angles, the angles being in arithmetical progression.

(ii) Sum to n terms the series

$$\sin (p+1)\alpha \cos \alpha + \sin (p+2)\alpha \cos 2\alpha + \dots$$

5. (i) Assuming the relation

$$(\cos \alpha + i \sin \alpha)^n = \cos n\alpha + i \sin n\alpha$$

where n is an integer, positive or negative, prove that $\cos n\alpha + i \sin n\alpha$ is one of the values of $(\cos \alpha + i \sin \alpha)^n$ where n is a fraction, positive or negative.

(ii) Prove that

$$\cos \left(\frac{n\pi}{2} - n\alpha \right) + i \sin \left(\frac{n\pi}{2} - n\alpha \right) = \left(\frac{1 + \sin \alpha + i \cos \alpha}{1 + \sin \alpha - i \cos \alpha} \right)^n,$$

where n is in integer.

6. (i) Assuming the binomial theorem for complex quantities and De Moivre's theorem, where n is a positive integer, expand $\cos \alpha$ in ascending powers of α .

(ii) Prove that

$$\sin^2 \alpha \cos \alpha = \alpha^2 - \frac{5}{6} \alpha^4 + \dots + (-1)^{n+1} \frac{3^{2n} - 1}{4 \cdot 2n} \alpha^{2n} + \dots$$

GROUP B

7. (i) Find the condition that three straight lines may meet in a point.

(ii) ABC is a given triangle, and BC any straight line parallel to BC meeting AB and AC at B' and C' respectively. Prove that the straight lines $B'C$ and BC' meet on the straight line AD , D being the middle point of BC .

8. (i) Find the equation to the two straight lines joining the origin to the points where the straight line $lm + my = n$ meets the curve.

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0.$$

If the axes be rectangular, find the condition that the two straight lines may be at right angles.

(ii) The axes being rectangular, find the equation to the pair of straight lines meeting at the origin which are perpendicular to the pair given by the equation.

$$ax^2 + 2hxy + by^2 = 0.$$

9. (i) Prove that the equation

$$x^2 + y^2 + 2gx + 2fy + c = 0$$

represents a circle. Find its centre and radius.

(ii) Prove that the locus of the middle points of such chords of a circle as pass through a fixed point is a circle.

10. (i) Find the condition that the straight line $y = mx + c$ may touch the parabola $y^2 = 4ax$.

(ii) Two equal parabolas have the same vertex, and their axes are at right angles, prove that the common tangent touch at the end of a latus rectum.

11. (i) Find the equation to the polar of the point (x_1, y_1) with respect to the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

(ii) Prove that the locus of the poles of such chords of an ellipse as touch a concentric and coaxial ellipse, is another concentric and coaxial ellipse.

12. (i) Find the equation to the pair of asymptotes of the hyperbola.

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1.$$

(ii) Find the equations to the two asymptotes of the curve $2x^2 + 5xy + 2y^2 + 4x + 5y = 0$;

and find the general equation of all hyperbolas having the same asymptotes.

MATHEMATICS—PASS

Second Paper

Answer any **six** questions, **one** at least being chosen from each group.

GROUP A

1. Define the differential coefficient of $f(x)$ with respect to x , and determine directly from your definition the differential coefficients with respect to x of $\sin x$ and x^n where n is a positive integer.

Show that the differential coefficient of

$$y = \left(\frac{x}{1 + \sqrt{1+x^2}} \right)^n,$$

with respect to x , is $\frac{ny}{x\sqrt{1+x^2}}$.

2. If the curve $y=f(x)$ has a tangent at the point x , inclined to the x -axis at an angle θ , show that

$$\frac{dy}{dx} = \tan \theta.$$

Draw a neat diagram for the proof of the above, containing the tangent at x and constructions, and point out all the *infinitesimals* in the diagram,

Find at what points on the curve

$$y = (x-3)^2 (x-2).$$

the tangent is parallel to the x -axis.

3. Expand each of the functions $\sin x$ and $\tan x$ to three terms by Maclaurin's theorem.

Show that for values of x so small that the fourth and higher powers of $\frac{x}{a}$ may be neglected, the catenary

$$y = \frac{1}{2}a(e^{x/a} + e^{-x/a})$$

may be replaced by a parabola.

State without proof the first three terms in the expansion of $f(a+h)$ in powers of h by Taylor's theorem. What is Lagrange's remainder form after n terms of the expansion ?

4. Prove that when y is a maximum or a minimum $\frac{dy}{dx}$ vanishes, but that if $\frac{dy}{dx}$ vanish y is not necessarily a maximum or minimum.

Find the maximum and minimum values of y where

$$y = x^3 - 3x.$$

GROUP B

5. Define $\int_a^b (x \, dx)$, where $b > a$, as the limit of a sum.

Evaluate $\int_0^1 x^2 \, dx$ as the limit of a sum.

Show that $\int_a^b \phi(x) \, dx$ represents a certain area.

6. Work out the following integrals .

$$(i) \int \tan^2 \theta \, d\theta, \quad (ii) \int \frac{x^2 \, dx}{x^2 - 4},$$

$$(iii) \int \frac{dx}{\sqrt{x^2 + a^2}}.$$

7. Evaluate :

$$(i) \int_0^8 \frac{dx}{1-x^4}, \quad (ii) \int_0^1 \sin^{-1} x \, dx,$$

$$(iii) \int_0^8 e^{-x} \cos x \, dx.$$

GROUP C

8. Solve the following equations :

$$(i) \frac{dy}{dx} + y = x;$$

$$(ii) x + y \frac{dy}{dx} = 2y;$$

$$(iii) (y-x) \, dy + y \, dx = 0,$$

9. Solve the following equations :

$$(i) \frac{dy}{dx} \cos x + y \sin x = 1;$$

$$(ii) \quad \frac{dy}{dx} + \frac{1-x^2}{x^2}y = 1;$$

$$(iii) \quad x \frac{dy}{dx} + y = y^2 \log x.$$

10. Solve the following :

$$(i) \quad \frac{d^2y}{dx^2} + 5 \frac{dy}{dx} + 4y = 0;$$

$$(ii) \quad \frac{d^2p}{dx^2} + 4y = x^2.$$

MATHEMATICS—PASS

Third Paper

Not more than four from either group should be attempted.

GROUP A

1. Find the specific gravity of a mixture of given weights of different substances whose specific gravities are also given.

The specific gravity of a mixture of equal volumes of two substances is s_1 and that of a mixture of equal weights of the same substances is s_2 . Determine the specific gravities of the two substances.

2. Prove that the pressure of a heavy homogeneous liquid at all points in the same horizontal plane is the same, and that the difference of pressure at any two points varies as the difference of their depths.

Three fluids whose densities are in arithmetical progression fill a semicircular tube whose bounding diameter is horizontal. Prove that the depth of one of the common surfaces is double that of the other.

3. Find the centre of pressure of a triangle whose base is horizontal and vertex in the surface of a homogeneous liquid, not exposed to pressure.

Show that centre of pressure of a parallelogram immersed in a liquid with one angular point in the surface and one diagonal horizontal, lies in the other diagonal and is at a depth equal to $\frac{1}{12}$ of the depth of its lowest point.

4. Find the conditions of equilibrium satisfied by a solid floating freely in a fluid.

A square lamina is placed vertically in a fluid of double its density ; prove that it can rest only with an edge or diagonal vertical.

5. Describe a Nicholson's hydrometer. What are its uses? What is its chief point of difference from a common hydrometer?

Describe Bramah's hydraulic press, explaining the hydrostatic principle which is utilized in it.

6. Enunciate Boyle's law, and show how it can be verified experimentally.

Find the height of one station above another by means of barometric observations.

GROUP B

7. Define—celestial meridian, prime vertical, celestial latitude, hour angle.

Calculate what would be the declination and right ascension of the sun on 21 April, if the changes in these quantities were uniform through the year.

Define the latitude of a place, and show how it can be determined by the observations of the transits of a circumpolar star over the meridian.

8. Find the coefficient of refraction by observing the apparent zenith distances of two circumstances of two circumpolar stars at their transits above and below the pole.

An altitude of a star is observed, and found to be the angle whose sine is $\frac{1}{2}$; calculate the true position of the star, assuming the amount of refraction at an altitude of 45° to be $58'2''$.

9. Explain what is meant by twilight, and prove that the duration of twilight depends upon the latitude of the place and the definition of the sun.

Find the condition that the twilight will last all night at a place. State, giving reasons, if twilight can last all night at a place whose latitude is 48° .

10. Explain the effect of aberration on the position of a star, and prove that aberration varies as the sine of the earth's way.

Prove that, due to aberration, a star situated at the pole of the ecliptic will, in the course of a year, appear to revolve round its true position in a circle.

11. Explain the phenomenon of the harvest moon.

Find the minimum and the maximum number of eclipses of the sun in a year.

12. What is the equation of time? Show that it vanishes four times a year.

The longitude of Paris 2°20' E and the longitude of Dublin is 6°40' W. Find the time at Dublin when it is 12 h. 6 m. at Paris.

Explain the principle on which a sun-dial is constructed.

1936

MATHEMATICS—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable.

Each question carries 16 marks, 4 marks being reserved for special excellence and neatness.

Only six questions, three from each group, to be attempted.

GROUP A

1. (i) Prove that, in triangle ABC ,

$$\tan \frac{A}{2} \tan \frac{B}{2} + \tan \frac{B}{2} \tan \frac{C}{2} + \tan \frac{C}{2} \tan \frac{A}{2} = 1$$

- (ii) Solve the equation

$$\sin \frac{n+1}{2}x + \sin \frac{n-1}{2}x = \sin x.$$

2. (i) Express the sine of an angle of a triangle in terms of the sides.

Hence express the area of a triangle in terms of the sides.

- (ii) Find the area of a quadrilateral which can be inscribed in a circle in terms of the sides.

3. (i) Solve the equation

$$2 \tan^{-1} x = \sin^{-1} \frac{2a}{1+a^2} + \sin^{-1} \frac{2b}{1+b^2}.$$

- (ii) Show that

$$2 \tan^{-1} \left(\sqrt{\frac{a-b}{a+b}} \tan \frac{x}{2} \right) = \cos^{-1} \frac{b+a \cos x}{a+b \cos x}.$$

4. (i) Find the sum of the cosines of a series of angles in arithmetical progression.

(ii) Sum to n terms the series

$$\sin \alpha \sin 3\alpha + \sin \frac{\alpha}{2} \sin \frac{3\alpha}{2} + \sin \frac{\alpha}{2^2} \sin \frac{3\alpha}{2^2} + \dots$$

5. (i) Prove that

$$(\cos \theta + i \sin \theta)^n = \cos n\theta + i \sin n\theta,$$

where n is an integer, positive or negative.

(ii) If

$$\cos \theta + \cos \phi + \cos \psi = 0 = \sin \theta + \sin \phi - \sin \psi,$$

prove that

$$\cos 3\theta + \cos 3\phi + \cos 3\psi - 3 \cos (\theta + \phi + \psi) = 0,$$

$$\sin 3\theta + \sin 3\phi + \sin 3\psi - 3 \sin (\theta + \phi + \psi) = 0.$$

6. (i) Assuming the binomial theorem for complex quantities, and De Moivre's theorem, where n is a positive integer, expand $\sin \alpha$ in ascending powers of α .

(ii) Find the value, when $x=0$, of the expression

$$\frac{3 \sin x - \sin 3x}{x - \sin x}.$$

7. (i) The axes being rectangular, find the equation of the bisectors of the angles between the straight lines.

$$a_1x + b_1y + c_1 = 0,$$

$$a_2x + b_2y + c_2 = 0.$$

(ii) Find the equations to the straight lines passing through the foot of the perpendicular from the point (h, k) upon the straight line $Ax + By + C = 0$ and bisecting the angle between the perpendicular and the straight line, the axes being rectangular.

8. (i) Find the condition that the general equation of the second degree may represent two straight lines.

(ii) If these two straight lines be parallel, find the distance between them, the axes being rectangular.

9. (i) The axes being rectangular, find the length of the tangent that can be drawn from the point (x_1, y_1) to the circle $x^2 + y^2 + 2gx + 2fy + c = 0$.

(ii) Prove that the locus of a point whose distance from a fixed point is in a constant ratio to the tangent drawn from it to a given circle is a circle.

10. (i) Find the equation to the normal to the parabola $h^2 = 4ax$ at the point (x_1, y_1) on it.

Prove that the locus of the middle point of the portion of a normal of a parabola intercepted between the curve and the axis is a parabola whose vertex is the focus of the original parabola and whose latus rectum is one-quarter of that of the original parabola.

11. (i) Find the locus of the middle points of parallel chords of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.

(ii) Prove that the straight lines, joining to the centre of an ellipse the points of intersection of any tangent to the ellipse with its director circle, are conjugate diameters of the ellipse.

12. (i) Find the general equation of all hyperbolas whose asymptotes are the straight lines.

$$Ax + By + C = 0,$$

$$A_1x + B_1y + C_1 = 0$$

(ii) Prove that the locus of the middle point of the portion, intercepted between two given straight lines, of a straight line which passes through a fixed point, is a hyperbola whose asymptotes are parallel to the given lines.

MATHEMATICS—PASS

Second Paper

Candidates are required to give their answers in their own words as far as practicable.

All the questions are of equal value.

You are to try only five questions, two from GROUP A, two from GROUP B, and one from GROUP C.

GROUP A

1. If $y=f(x)$ denote a continuous curve possessing a tangent at each point x , show that the function $f'(x)$ has a differential coefficient $f''(x)$ at x equal to $\tan \theta$, when θ is the angle which the tangent at x makes with the x -axis.

If the tangent turn continuously, show *graphically* for the above curve that the maximum and minimum values of y are obtained, in general, by putting $f'(x)=0$.

Point out *graphically* a possible exception to this rule.

2. Differentiate.

$$y = \log (\sqrt{x-a} + \sqrt{x-b}).$$

If $y = e^{ax} \sin bx$, prove that

$$\frac{d^2y}{dx^2} - 2a \frac{dy}{dx} + (a^2 + b^2)y = 0.$$

3. Find the n th differential coefficients of $\sin x$ and $\cos x$.

Expand $\tan^{-1}x$ to four significant terms.

4. Find for what values of x the following expression is a *maximum* and a *minimum*, respectively :

$$2x^3 - 21x^2 + 36x - 20.$$

Show that the maximum rectangle inscribable in a circle is a square.

GROUP B

5. Define $\int_a^b f(x) dx$ as the limit of a sum. Calculate directly from the definition as the limit of a sum, the value of $\int_0^1 x^3 dx$.

6. Obtain the following integrals :

$$(i) \int \frac{d\theta}{\sin \theta}, \quad (ii) \int \tan^{-1} x dx, \quad (iii) \int \frac{dx}{x^4 - 1},$$

7. Integrate and evaluate.

$$(i) \int_0^{\frac{\pi}{2}} \cos^2 x dx, \quad (ii) \int_0^{\frac{\pi}{4}} \tan^{-1} x dx,$$

and

$$(iii) \int_0^1 xe^x dx$$

GROUP C

1. Solve the following differential equations :

$$(i) x + y \frac{dy}{dx} = 2y; \quad (ii) (x+y)^2 \frac{dy}{dx} = a^2;$$

$$(iii) y = px + p - p^2.$$

9. Solve the following differential equations :

$$(i) \frac{d^2y}{dx^2} + 3 \frac{dy}{dx} + 2y = 0;$$

$$(ii) \frac{d^2y}{dx^2} - 4 \frac{dy}{dx} + y = 0;$$

$$(iii) \frac{d^2y}{dx^2} - 4\frac{dy}{dx} + 4y = x^2.$$

MATHEMATICS—PASS

Third Paper

Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

*Any **six** questions carry full marks.*

*Not more than **four** from either group should be attempted*

GROUP A.

1. Prove that the surface of separation between two fluids of different densities is a horizontal plane.

Prove that if a parallelogram be immersed in any manner in a heavy homogeneous liquid, the sum of the pressures at the extremities of one diagonal is equal to the sum of the pressures at the extremities of the other diagonal.

2. Prove that the pressure at any point of a fluid at rest is the same in all directions.

Calculate the depth of the centre of pressure of a rectangle placed vertically in a liquid with one side in the surface, not exposed to atmospheric pressure.

3. Find the conditions of equilibrium of a body partly immersed in a liquid and supported by a string attached to some point of it.

A uniform rod capable of turning about one of its ends which is out of water, rests inclined to the vertical with one-third of its length in water. Prove that its specific gravity is $\frac{5}{6}$.

4. Prove that the specific gravity of a mixture of given substances is greater when equal volumes are taken than when equal weights are taken.

Two volumes, v_1 and v_2 , of different gases at different pressures p_1 and p_2 , are mixed together and put into a vessel of volume V . Find the resulting pressure, the temperature being constant.

5. Describe the common pump, and explain its action. Obtain the height through which the water rises in one stroke of the piston.

6. Explain the action of the siphon, and find the conditions which must hold so that the siphon can act.

Explain the action of a hydrostatic machine which may be used for the purpose of pumping the air out of a vessel in which a vacuum is desired.

GROUP B.

1. Explain Foucault's pendulum experiments to prove the earth's rotation.

If a person travelling eastward goes round the earth, he will at the end of his journey appear to have gained a day. On the other hand, if he travels westward, he will appear to lose a day. Explain this.

2. Describe the transit instrument, and explain how it is corrected for the various errors to which its readings are subject.

How do you find the pole by observation of the transits of a circumpolar star?

3. Explain the phenomenon of the seasons.

Explain how the average amount of heat derived from the sun each day in summer is greater than in winter, and further how the mean temperature is higher in August than in June, and lower in February than in December.

4. Enumerate the different causes which produce an apparent change in the position of a body, and explain the change produced in each case.

The apparent altitude of a star is 30° . Find the true altitude, the coefficient of refraction being $58.2''$.

5. Calculate the conditions for (i) a lunar, and (ii) a solar eclipse.

How are solar and lunar ecliptic limits found?

6. What do you mean by the equation of time?

Prove, by reference to its causes, that the equation of time vanishes four times a year.

Given that sidereal time is 5 h. 32 m. 37 s. and the right ascension of the mean sun at mean noon is 7 h. 37 m. 32 s. find mean time.

1937

MATHEMATICS—PASS

First Paper

Candidates are required to give their answers in their own words as far as practicable.

Only six questions, three from each group, to be attempted.

GROUP A

1. (i) If $2 \tan A = 3 \tan B$, show that

$$\tan (A - B) = \frac{\sin 2B}{3 - \cos 2B}.$$

- (ii) If $A + B + C = \pi$, show that

$$\cos \frac{A}{2} + \cos \frac{B}{2} + \cos \frac{C}{2} = 4 \cos \frac{B+C}{4} \cos \frac{A+C}{4} \cos \frac{A+B}{4}.$$

2. (i) Solve $2 \sin x + \sin^2 x = 2$.

- (ii) Show that

$$\tan \left(\frac{\pi}{4} + \frac{1}{2} \cos^{-1} \frac{a}{b} \right) + \tan \left(\frac{\pi}{4} - \frac{1}{2} \cos^{-1} \frac{a}{b} \right) = \frac{2b}{a}$$

3. Show that in a triangle

$$(i) \frac{a^2 \sin (B-C)}{\sin B + \sin C} + \frac{b^2 \sin (C-A)}{\sin C + \sin A} + \frac{c^2 \sin (A-B)}{\sin A + \sin B} = 0,$$

$$(ii) \sin A + \sin B + \sin C = \frac{s}{R},$$

where $2s = a + b + c$ and R is the radius of the circumscribed circle.

4. (i) Show that $\theta = \tan^{-1} \theta + \frac{1}{3} \tan^3 \theta + \frac{1}{5} \tan^5 \theta \dots$ when θ lies between $-\pi/4$ and $+\pi/4$.

- (ii) Show that

$$\tan \left(i \log \frac{a-bi}{a+bi} \right) = \frac{2ab}{a^2 - b^2}.$$

5. (i) Find the sum of the sines of a series of angles which are in arithmetical progression.

- (ii) Sum to n terms the series

$$\sin^2 \alpha + \sin^2 (\alpha + \beta) + \sin^2 (\alpha + 2\beta) \dots$$

6. (i) Establish De Moivre's theorem for a positive integral index.
 (ii) Expand $\sin x$ in ascending powers of x ,
 (iii) Write down the expansion of $\cos x^\circ$.

GROUP B

7. (i) Show that any equation of the first degree in x and y always represents a straight line.

(ii) Find the equation to the straight line which passes through the intersection of the lines.

$$x + 2y + 3 = 0 \text{ and } 3x + 4y + 7 = 0.$$

and is perpendicular to the straight line $y - x = 8$.

8. (i) Prove that the equation

$$x^2 + 6xy + 9y^2 + 4x + 12y - 5 = 0$$

represents two parallel straight lines.

(ii) Find the condition that two of the straight lines represented by the equation

$$ax^2 + bx^2y + cxy^2 + dy^3 = 0$$

may be at right angles.

9. (i) Find the equation to the tangents to the circle

$$x^2 + y^2 - 6x + 4y = 12$$

which are parallel to the straight line

$$4x + 3y + 5 = 0.$$

(ii) Find the locus of the middle points of chords of the circle $x^2 + y^2 = a^2$ which pass through the fixed point (h, k) .

10. (i) Find the condition that the straight line

$$y = mx + c$$

may touch the parabola $y^2 = 4ax$.

(ii) Find the locus of the middle points of chords of a parabola which subtend a right angle at the vertex.

11. (i) Find the condition that

$$x \cos \alpha + y \sin \alpha = p$$

may touch the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.

(ii) Find the locus of the point of intersection of tangents to an ellipse which meet at right angles.

12. (i) Find the asymptotes of the hyperbola

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1.$$

(ii) If e and e' be the eccentricities of a hyperbola and its conjugate, prove that

$$-\frac{1}{e^2} + \frac{1}{e'^2} = 1.$$

(iii) If a pair of diameters be conjugate with respect to a hyperbola, they will be conjugate with respect to its conjugate hyperbola. Establish.

MATHEMATICS—PASS

Second Paper

Candidates are required to give their answers in their own words as far as practicable.

Only seven questions are to be attempted, of which not more than three must be from one group.

The questions are of equal value

Two marks reserved for neatness.

GROUP A.

1. (i) Define 'differential co-efficient.' Interpret it geometrically, and also as a rate-measurer.

(ii) Deduce from your definition the differential co-efficient of

$$a \sin \frac{x}{a}.$$

2. Find the different co-efficient of y , in the following cases :

$$(i) \ y = x^x; \quad (ii) \ y = x^y; \quad (iii) \ x = y \log xy, \\ (iv) \ x^{y^z} y^z = 1.$$

3. (i) Find the n th differential co-efficients of the following functions :—

$$(1) \ y = e^{ax} \sin (bx + c),$$

$$(2) \ y = e^{ax} \cos (bx + c).$$

(ii) If $g = e^{ax} \cos bx$, prove that

$$y_2 - 2ay_1 + (a^2 + b^2)y = 0,$$

and hence that

$$e^{ax} \cos bx = 1 + ax + \frac{a^2 - b^2}{2!} x^2 + \frac{a(a^2 - 3b^2)}{3!} x^3 + \dots$$

Deduce the expansions of e^{bx} and of $\cos bx$

4. Find the pedal equation of the equiangular spiral

$$r = ac^{\theta \cot \alpha},$$

and obtain an expression for the radius of curvature.

5. Find the asymptotes, and draw their positions, for the following curves ;

(i) $x^2y^2 - x^2y - xy^2 + x + y + 1 = 0$;

(ii) $r\theta = a$.

GROUP B

6. Explain integration as summation.

Calculate by this method the value of

$$\int_0^1 x^2 dx.$$

7. Obtain any **three** of the following integrals :—

(i) $\int x \sin x \, dx$;

(ii) $\int \frac{xe^x dx}{1+x^2}$;

(iii) $\int \frac{(c-1)dc}{(c-3)(c-2)}$;

(iv) $\int \frac{dx}{(x^2+a^2)(x^2+b^2)}$.

8. Integrate and evaluate any **three** of the following :—

(i) $\int_0^{\pi} \sin mx \sin nx \, dx$;

(ii) $\int_0^{\pi} \sin^2 nx \, dx$ (n an integer) :

(iii) $\int_a^{\beta} \sqrt{(x-a)(\beta-x)} \, dx$;

(iv) $\int_0^1 \frac{1-x}{1+x} \, dx.$

9. Obtain the total area of **three** loops of the curve

$$r = a \sin 3\theta$$

10. Explain how to obtain the intrinsic equation from the polar equation of a curve.

Find the intrinsic equation to the cardioid

$$r = a(1 - \cos \theta).$$

GROUP C

11. Solve the following differential equations :—

$$(i) \quad \frac{dy}{dx} + \frac{ax + hy + g}{hx + by + f} = 0 ;$$

$$(ii) \quad \cos^2 x \frac{dy}{dx} + y = \tan x ;$$

$$(iii) \quad (x^2 + y^2)dx - 2xy dy = 0.$$

12. Solve any two of the following differential equations :—

$$(i) \quad \frac{d^2y}{dx^2} + (a + b) \frac{dy}{dx} + aby = 0.$$

$$(ii) \quad \frac{d^2y}{dx^2} - 2a \frac{dy}{dx} + a^2 y = 0 ;$$

$$(iii) \quad \frac{d^2y}{dx^2} + y = \cos 2x.$$

MATHEMATICS—PASS

Third Paper

Candidates are required to give their answers in their own words as far as practicable.

Not more than four questions from either group should be attempted.

The questions are of equal value.

Any six questions carry full marks.

GROUP A.

1. Find the specific gravity of a mixture of given volumes of different substances whose specific gravities are given.

10 lb. weight of liquid of specific gravity 1.25 is mixed with 6 lb. weight of a liquid of specific gravity 1.15. What is the specific gravity of the mixture ?

2. Find the thrust on a plane surface immersed in a liquid in terms of the area of the plane surface and the depth of its centre of gravity below the surface of the liquid, the pressure of the air being neglected.

A square plate, whose edge is 8 inches, is immersed in water, its upper edge being horizontal and at a depth of 12 inches below the surface of the water. Find the thrust of the water on the surface of the plate when it is inclined at 45° to the horizon, the mass of a cubic foot of water being 61 lb.

3. Find the conditions of equilibrium of a body floating freely in a liquid.

A uniform rod, of length $2a$, floats partly immersed in a liquid, being supported by a string fastened to one of its ends. If the density of the liquid be $\frac{4}{5}$ times that of the rod, prove that the rod will rest with half of its length out of the liquid. Find also the tension of the string.

4. A plane area is immersed in a homogeneous liquid, and the depth of its centres of gravity and pressure are respectively a and b ; if the whole area be now lowered (without any rotation), find the new position of the centre of pressure.

A triangle is wholly immersed in a liquid with its base in the surface. Show that a horizontal straight line drawn through the centre of pressure of the triangle divides it into two parts, the pressures on which are equal.

5. Prove how, by using a bent tube, the specific gravities of two liquids which do not mix may be compared.

A diving-bell is lowered into water; find the amount of air at atmospheric pressure that must be forced in so that the water may not rise within the bell.

6. Give an experimental verification of Boyle's Law.

At sea-level, the barometer stands at 750 mm. and the temperature is 7°C ., while on the top of a mountain it stands at 400 mm. and the temperature is 13°C . Compare the weights of a cubic metre of air at the two places.

GROUP B

7. Define—celestial equator, ecliptic, celestial latitude, hour angle.

What point in the heavens has its declination, right ascension, latitude, and longitude each equal to zero?

Show that the zenith distance of a star is least when on the meridian.

8. Give a proof of the earth's rotation from the experiment of letting a body fall from the top of a high tower.

How do you find the polar point on the meridian circle ?

The zenith distances of a circumpolar star as it crosses the meridian above and below the pole are found, after correcting for refraction, &c. to be $13^{\circ} 7' 16''$ and $47^{\circ} 18' 26''$. Calculate from this the latitude of the place and the declination of the star.

9. Establish the law of refraction of a heavenly body. $x = k \tan z$ find k when the latitude of the place of observation is known.

The apparent zenith distance of a star is 30° , calculate the true zenith, assuming the coefficient of refraction to be $58'' 2''$.

10. State Kepler's law.

Deduce from Kepler's third law that the velocities of planets round the sun are inversely as the square roots of their distances from the sun.

Assuming the mean distance of Venus to be 0.72, that of the earth being unity, apply Kepler's laws to find the periodic time of Venus.

11. Explain the phenomenon of the harvest moon.

Find the condition that the twilight may last all night at a place. Find the lowest latitude at which it is possible for twilight to last all night.

12. Find the minimum and the maximum number of eclipses of the sun and the moon in a year.

Given that the sun rose on a certain date at 6h. 51 a. m. and set at 4h. 33 m. p. m. find the equation of time.

B. A. EXAMINATION, 1938

ENGLISH—PASS

FIRST PAPER

1. **Either**, 'Thou loss upon loss ! the thief gone with so much, and so much to find the thief ; and no satisfaction, no revenge.' How far does this speech help you to understand the character of the speaker ?

Or, 'The lottery of the caskets is a test of the character.' Show how the different lines of argument that lead Morocco and Arragon to make their choice reveal the difference between their characters.

2. **Either**, Discuss the character of Macduff. (Consider in this connexion the lines—'All is the fear and nothing is the love ; As little is the wisdom.')

Or, Give an outline of the sleep-walking scene in *Macbeth*, and mention the incidents to which Lady Macbeth refers. What is the dramatic value of the scene ?

3. **Either**, What is Bassanio's estimate of Gratiano's character ? How far is that estimate justified by Gratiano's behaviour in the play ?

Or, Sketch the character of Duncun. What is the most prominent trait in his character ?

4. **Either**, Give the substance of Wordsworth's *Nature and the Poet (Peele Castle)*, and elucidate the moral of the poem.

Or, Give an outline of *Youth and Age* by Byron, and compare his reflections with those of Coleridge in his poem of that name.

5. Explain any four of the following passages. :—

- (a) To be a prodigal's favourite—then, worse truth,
A miser's pensioner—behold our lot !
O Man ! that from thy fair and shining youth
Age might but take the things Youth needed not !

- (b) Time, thou anticipatest my dread exploits :
The flighty purpose never is o'erlooked
Unless the deed go with it : from this moment
The very firstlings of my heart shall be
The firstlings of my hand.

- (c) Quiet coves
 His soul has in its Autumn, when his wings
 He furlleth close ; contented so to took
 On mists in idleness—to let fair things
 Pass by unheeded as a threshold brook :
 He has his Winter too of pale misfeature,
 Or else he would forgo his mortal nature.
- (d) Now, by two-headed Janus,
 Nature hath framed strange fellows in her time :
 Some that will evermore peep through their eyes
 And laugh like parrots at a bag-piper,
 And other of such vinegar aspect
 That they'll not show their teeth in way of smile,
 Though Nestor swear the jest is laughable.
- (e) Was the hope drunk
 Wherein you dress'd yourself ? hath it slept since,
 And wakes it now, to took so green and pale
 At what it did so freely ? From this time
 Such I account thy love.
- (f) That only to stand high in your account,
 I might in virtues, beauties, livings, friends,
 Exceed account ; but the full sum of me
 Is sum of nothing which, to term in gross,
 Is an unlesson'd girl, unschool'd, unpractised.

ENGLISH—PASS

SECOND PAPER

1. Either, 'De Quincey's talent lay more in a narrative and imaginative writing than in literary criticism.' Discuss.

Or, 'The first two sections of *The English Mail-Coach* are noble pieces of prose-poetry, and more successful, all in all, than the appended "Dream Fugue".' Discuss.

2. Either, Write after Sir Walter Raleigh a short critical estimate of Don Quixote.

Or, 'A mere scholar, who knows nothing but books, must be ignorant even of them.' Develop the views of Hazlitt. Do you agree with him ? Give reasons for your answer.

3. Either, 'The most dramatic and the most familiar way of looking at the domestic history of the first half of the nineteenth century is to regard it as an epic struggle between the landlords and

the manufacturers, between the spirit of feudalism and the spirits of Commerce.' Discuss the part played by Cobden in this struggle.

Or, Do you agree with Thackeray in his estimate of the position occupied by Swift as a satirist? Give reasons for your answer.

4. Either, Indicate the place occupied by the Book of Proverbs in the Wisdom literature of the Hebrews.

Or, State the main theme of the First Epistle of St. Paul to the Corinthians, and indicate the circumstances under which it was written.

5. Explain, with reference to the context, any four of the following :—

(a) Then was Milton's soul stirred within him to a noble rage. His was a threefold protest—as a citizen of a State he fondly hoped had been free, as an author, and as a reader.

(b) The year 1879 was a dark one in the life of Louis. He had formed a conviction that it was his duty to go out to the extreme west of the United States, while his family and the inner circle of his friends were equally certain that it was neither needful nor expedient that he should make this journey.

(c) History has no story more sad than that of the wretched king, hard at death's door, compelled to submit to the ferocious vindictiveness of the one son, and turning his face to the wall with a broken heart when he discovered the hateful treachery of the other.

(d) The Story of the World is played out like a drama in many acts and scenes, not like successive games of chess, in which the pieces meet, combat, and manoeuvre for a time, and then the board is cleared for another trial, and they are replaced in their original positions.

(e) The Lord by wisdom hath founded the earth; by understanding hath he established the heavens.

Or,

The Lord by wisdom hath founded the earth, hath established the heavens by prudence.

(f) Our fathers had the tabernacle of witness in the wilderness, as he had appointed, speaking unto Moses, that he should make it according to the fashion that he had seen.

Or,

The tabernacle of the testimony was with our fathers in the

desert, as God ordained for them, speaking to Moses that he should make it according to the form which he had seen.

(g) The modern modes of travelling cannot compare with the old mail-coach system in grandeur and power. They boast of more velocity—not, however, as a consciousness, but as a fact of our lifeless knowledge, resting upon *alien* evidence.

ENGLISH—PASS

THIRD PAPER

1. Write an essay on any **one** of the following subjects :

- (a) The advantages of literary education.
- (b) Discipline in daily life.
- (c) 'Where justice reigns, 'tis freedom to obey.'

2. Give the substance of **one** of the following passages :

(a) No refining of one's taste in matters of art or literature, no sharpening of one's powers of insight in matters of science and psychology, can ever take the place of one's sensitiveness to the life of the earth. This is the beginning and the end of a person's true education. Art and literature have been shamefully abused, have been perverted from their true purpose, if they do not conduce to it. The cultivation in one's inmost being of a thrilling sensitiveness to Nature is a slow and very gradual process. The first conscious beginnings of it in early childhood are precious beyond words as the origin of dominant memories ; but the more deliberately we discipline our sensitive grasp of these things, the deeper our pleasure in them grows. The first conscious aim which it would be wise to concentrate upon is the difficult art of simplification. The difference between cultured people and uncultured people, in regard to their response to Nature, is that the former make a lot of a little, whereas the latter make little of a lot. By this I mean that the less cultured you are the more you require from Nature before you can be aroused to reciprocity. Uncultured people require blazing sunsets, awe-inspiring mountains, astonishing waterfalls, masses of gorgeous flowers, portentous signs in the heavens, exceptional weather on earth, before their sensibility is stirred to a response. Cultured people are thrilled through and through by the shadow of a few waving grass-blades upon a little flat stone, or by a single dock-leaf growing under the railings of some city square. It is an affectation to boast, as certain moralists do, that a city-dweller can get the same thrill from dingy sparrows and dusty foliage as from a ruin-wet meadow full of buttercups. Better were

it, than any such pretension, simply to recognize that in the deepest levels of culture city-dwellers are at a disadvantage compared with country-dwellers. Better were it, if it is your ill-luck to live in a city, to hasten into the country, at least once a week, and spend all your dreams during the other days in remembering that happy seventh-day excursion.

(b) Literature is the written record of valuable thought, having other than a merely technical purpose. It is the preserved sum-total of the best ideas of the world's noblest men and women. It is the tale of 'that common humanity whose sorrowings and sinnings, whose hopes and joys and little triumphs, constitute the great story which all the pens of time have tried to tell—the story which leads back and sets man face to face with the Undiscoverable'. Of all existing occupations, therefore, none is better than that of good reading, wisely to be used. It is treasure laid up for heaven, for the mind endures when the body is scattered dust. Literature is more real and more lasting than stocks and securities, statues and buildings. 'The world of imagination,' it has been observed, 'is not the world of abstraction and nonentity, as some conceive, but a world formed out of chaos by a sense of the beauty that is in man and the earth on which he dwells. Every book we read may be made a round in the ever-lengthening ladder by which we climb to knowledge and to that temperance and serenity of mind which, as it is the ripest fruit of wisdom, is also the sweetest....The riches of scholarship, the benignities of literature, defy fortune and outlive calamity. They are beyond the reach of thief or moth or rust. As they cannot be inherited, so they cannot be alienated.' 'The grandest aim of imaginative art,' says Ruskin, 'is to give men noble grounds for noble emotion.' Literature is but one of the imaginative arts; and it is that art which presupposes a development of culture, which has been aptly defined as an 'interest in the best things said and written in the world'. The best things are the remnant, the chosen few, the selected minority. There were nine sibylline books, then three were thrown away, then again three, but remaining ones were more valuable than the nine. 'Literature', says John Morley, 'consists of all the books—and they are not so many—where moral truth and human passion are touched with a certain largeness, sanity, and attraction of form.'

3. Explain clearly the meaning underlying one of the following poem :—

(a) *To a Successful Man.*

And after all the labour and the pains,
After the heaping up of gold on gold,

After success that locked your feet in chains,
 And left you with a heart so tired and old,
 Strange—is it not?—to find your chief desire
 Is what you might have had for nothing then—
 The face of love beside a cottage fire
 And friendly laughter with your fellow-men ?
 You were so rich when fools esteemed you poor.
 You ruled a field that kings could never buy :
 The whisper of the sea was at your door,
 And all those quiet stars were in your sky.
 The nook of ferns below the breathless wood
 Where one poor book could unlock Paradise...
 What will you give us now for that lost gold ?
 Better forget. You cannot pay the price.
 You left them for the fame in which you trust.
 But youth, and hope—did you forsake them too ?
 Courage ! When dust at length returns to dust,
 In your last dreams they may come back to you.

(b) *Everest.*

What went you forth to find ?
 What new thing would you know ?
 What secret read in the Mother of Mountain's blind,
 blind eyes ? What learn at her barren bosom of snow ?
 For what new things should men
 so strive, so agonize ?
 Is there some wonder in the remoteness beyond our ken ;
 some beauty ; some wisdom beyond the dream of the wise ?
 Nay, not for that we strove,
 nor any new thing found :
 but this truth, ancient and everlasting, did we prove,
 this beauty, this wisdom, on the high untrodden ground :
 that where the safe ways end,
 known and unknown divide,
 God's great uncharted passes upward tend,
 and the spirit of men undaunted is undenied ;
 and beyond the last camp-fire man has Faith for friend,
 and beyond all guidance the courage of God for guide.

BENGALI VERNACULAR

1. Either, Explain the following passage :—

ইউরোপের ঐহিকবাদিতার প্রতি লক্ষ্য না করিয়া বরং যতটা সম্ভব, উহা হইতে দূরে সরিয়া
 বাইরা আমাদের জাতীয়তা ও চিরস্থায়ী ধর্মতাবকে জাগ্রত রাখিতে হইবে।

Or, Menton briefly the steps suggested by Sir Asutosh Mookerjee for the improvement of our national literature.

2. Give a short sketch of the life of Lutfu-n-nisa and say how far it influenced the course of the story in *Kapal-Kundala*.

3. Explain any three of the following passages with reference to the context :—

(a) যদি হ ত দূরবর্তী পর
নাহি ছিল ক্ষোভ । শর্বরীর শশধর
মধ্যাহ্নের তপনের স্বেদ নাহি করে,
কিন্তু প্রাতে এক পূর্ব-উদয়-শিখরে
ছই ভ্রাতৃ-স্বর্য়্যালোক কিছুতে না ধরে ।

(b) কুরুবংশ রাজস্বামী নাহি র'বে আর,
গুধু র'বে অন্ধ পিতা, অন্ধ পুত্র তা'র
আর কালাস্তক যম, গুধু পিতৃশ্রেহ
আর বিধাতার শাপ, আর নহে কেহ ।

(c) জিজ্ঞাসিও বিজ্ঞ জটায়ুরে,
ত্রাঘকে না পাও যদি, অধিকার পদে
কহিও এ সব কথা ।

(d) চিত্রাঙ্গদা হৃকেশিনী মিশ্রকেশী আসি
নাচিলা শিল্পিতে রঞ্জি দেবকুল মনঃ ।

4. Amplify the idea contained in the following extracts :—

(a) কে লইবে মোর কার্য্য ? কহে সন্ধ্যা-রবি ।
গুনিয়া জগৎ রহে নিরন্তর ছবি ।
মাটির প্রদীপ ছিল, সে কহিল, আমি !
আমার যে টুকু সাধ্য করিব তা' আমি ।

(b) যৌবনে অজিত স্মৃথ অন্ন কিন্তু স্মৃথের আশা অপরিমিতা ।

5. Explain, with reference to the context, any two of the following passages :—

(a) তুমি আমি প্রাণভাগ করিতে চাহি না। রাগ করিয়া বাহা বলি, এ সংসার স্বধর্ম।
হৃথের প্রত্যাশাতেই বর্ত্তুলবৎ সংসার মধ্যে ঘুরিতেছি—হৃথের প্রত্যাশায় নহে।

(b) অনেক বৌদ্ধ গ্রন্থের দুই একটি স্থল ঈষৎ পরিবর্তন পূর্বক কোথাও প্রমাণ সূত্রকে
বদলাইয়া সমগ্র গ্রন্থ খানিকে “হিন্দু” করা হইয়াছে।

(c) ক্রমেই যে ভয়ঙ্কর কাল আসিতেছে, সেই কালের সহিত প্রতিদ্বন্দিতায় দেশবাসী-
দিগকে জয়ী করিতে হইলে কেবল, এ দেশীয় নহে, পাশ্চাত্য আয়ুধেও সম্পন্ন হইতে হইবে।

6. (a) Correct the mistakes in the following :—

উর্দ্ধমুখে পথ চলিলে পতন অবশ্যস্বাভাবি ; সান্তিশয় ব্যায় করিয়া উৎসবাদি করা এত্বনকার
অর্ধশতকের দিনে যুক্তিযুক্ত নহে। বরঞ্চ সৌজন্যতার দ্বারা লোকের সহিত সৌহার্দ স্থাপন করা
ভাল।

(b) Write in correct and elegant Bengali any one of the following :—

(i) কর না কেন তুমি যত পরিশ্রম, থাকুক না কেন তোমার যত বিত্তাবুদ্ধি, পারিবে
না তুমি পরীক্ষায় প্রতিদ্বন্দিতা করিতে কিছুতেই হৃথের সঙ্গে।

(i) আমি দারুণ মনোকষ্টে ছায় শিরমণির কাছে বাইয়া আমার সম্ভ্রান্ত মেয়েটির
হৃথার সংবাদ জানাইয়া অশৌচের ব্যবস্থা চাহিলাম।

7. Translate into Bengali any one of the following :—

(a) It is impossible to describe the beauty of the Taj in words.
It has been called ‘a dream in marble’ and ‘a tear-drop on the cheeks
of time’ but the fairest phrases fail to do justice to this surpassing
creation of art. The Taj is best seen by moonlight when the
dazzling white of the marble is mellowed into a dreamy softness.
The most charming view, perhaps, is obtained from the palace on
the opposite bank of the river whence the plinth is not visible and
the building looks a fairy castle in the air, hung among the cloud.

(b) It must be recognized that a prejudiced view of India had
grown up in England, so that young men came out to India
ignorant, and sometime contemptuous, of the civilization of the
country. To some extent this prejudice must be attributed
to the zeal of missionaries and philanthropists, who in their

eagerness for reform overstressed the darker shadows of Indian life. Suttee had prevailed until 1830; slavery was still legal in 1842; some tribes were accustomed to kill their female children, &c. These and other ugly facts were grave blots on Indian civilization, but over-insistence on them produced a distorted picture.

8. Write an essay in Bengali on one of the following subject :—

- (a) Epic poetry; its influence on national character.
- (b) Modern Bengali poets.
- (c) The present financial stringency of Bengal and its causes.
- (d) Self-government: its nature and the conditions needed make it successful.

MATHEMATICS—PASS

First Paper.

Answer six questions only, three from each group.

Group A.

1. (i) Given that

$$(2m+1) \sin \theta - (m-2) \cos \theta = m+2,$$

obtain $\tan \theta$ in its most simplified form,

(ii) Solve the equation

$$1 + \cos \theta = 2 \cos^2 \theta.$$

2. (i) Eliminate θ between the equations

$$x = \sin (\theta + \alpha), y = \cos (\theta + \beta).$$

(ii) If r denotes the radius of the in-circle and r_1, r_2, r_3 those of the escribed circles of a given triangle, prove that

$$\frac{1}{r} = \frac{1}{r_1} + \frac{1}{r_2} + \frac{1}{r_3}.$$

3. (i) Show that

$$\tan^{-1} x = 2 \tan^{-1} (\operatorname{cosec} \tan^{-1} x - \tan \cot^{-1} x).$$

(ii) If

$$\frac{\cos \alpha + \cos \beta + \cos \gamma}{\cos (\alpha + \beta + \gamma)} = \frac{\sin \alpha + \sin \beta + \sin \gamma}{\sin (\alpha + \beta + \gamma)},$$

show that

$$\sin (\beta + \gamma) + \sin (\gamma + \alpha) + \sin (\alpha + \beta) = 0.$$

4. (i) Prove De Moivre's theorem when the exponent is (1) a positive integer, (2) a negative integer.

(ii) Find the different values of $(1+i)^{\frac{1}{3}}$ and evaluate their product.

5. (i) Find the sum of n terms of series

$$\cos \alpha + \cos (\alpha + \beta) + \cos (\alpha + 2\beta) + \dots$$

(ii) Show that the coefficient of x^n in the expansion

of $e^x \cos x$ in ascending powers of x is $\frac{2^n}{n!} \cos \frac{n\pi}{4}$.

6. (i) Prove that

$$\cos \theta = 1 - \frac{\theta^2}{2!} + \frac{\theta^4}{4!} - \dots + (-1)^n \frac{\theta^{2n}}{(2n)!} + \dots$$

(ii) If $\cot y = \cot x + \operatorname{cosec} x \operatorname{cosec} x$, show that
 $y = \sin x \sin \alpha + \frac{1}{2} \sin 2x \sin^2 \alpha + \frac{1}{3} \sin 3x \sin^3 \alpha + \dots$

Group B

7. If the points (a, b) , (a', b') , $(a-a', b-b')$ are collinear, show that their join passes through the origin and that $ab' = a'b$.

A point moves so that its distance from the x -axis is equal to its distance from the point $(1, 1)$; find the equation of its locus.

8 (i) The angle between the two lines

$$ax^2 + 2hxy + by^2 = 0$$

is ϕ ; show that

$$\tan \phi = \pm \frac{2\sqrt{h^2 - ab}}{a+b}$$

Discriminate the two values of $\tan \phi$.

(ii) Show that the equation

$$2x^2 - 7xy + 3y^2 + x + 7y - 6 = 0$$

represents two straight lines, and find the angle between them.

9. (i) Obtain the equation of the tangent to the circle $x^2 + y^2 = a^2$ at the point $(a \cos \theta, a \sin \theta)$.

(ii) Show that the locus of the feet of the perpendiculars from a fixed point on a circle upon its diameters is another circle, and determine its centre and radius.

10. (i) Obtain the equation of the normal at any point (x', y') of the parabola $y^2 = 4ax$.

(ii) The perpendicular from a point P upon its polar with respect to a parabola is of constant length. Find the locus of the point P .

11. (i) Obtain the coordinates of a point on an ellipse in terms of its eccentric angle and show that the eccentric angles of the extremities of a pair of conjugate diameters differ by $\frac{\pi}{2}$.

(ii) Prove that the product of the perpendiculars from the foci of an ellipse upon any tangent is constant.

12. (i) Obtain the equation of a rectangular hyperbola referred to its asymptotes as axes of coordinates.

(ii) Prove that the area of the triangle formed by the asymptotes and any tangent to a hyperbola is constant.

MATHEMATICS—PASS

SECOND PAPER

GROUP A

1. (i) Evaluate : $\lim_{x \rightarrow 0} \left(\frac{\tan x}{x} \right)^{\frac{1}{x^2}}$.

(ii) Explain the geometrical meaning of a differential coefficient. Find the equation of the tangent at (α, β) on the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

2. (i) Find the differential co-efficients of y with respect to x in the following cases :

$$(1) y = x^x ; \quad (2) y = \tan^{-1} \frac{x}{\sqrt{1-x^2}}.$$

(ii) Find the differential co-efficient of $x^{\sin^{-1}x}$ with respect to $\sin^{-1}x$.

3. (i) Find the n th differential co-efficient of

$$\tan^{-1} \frac{2x}{1-x^2}.$$

(ii) If $y = \sin (m \sin^{-1}x)$, prove that

$$(1-x^2)y_{n+2} - (2n+1)xy_{n+1} + (m^2-n^2)y_n = 0;$$

and hence that

$\sin (m \sin^{-1}x)$

$$= mx - \frac{m(m^2-1^2)}{3!}x^3 + \frac{m(m^2-1^2)(m^2-3^2)}{5!}x^5 - \dots$$

4. (i) Find that normal to $\sqrt{xy} = a+x$ which makes equal intercepts upon the co-ordinate axes.

(ii) Show that the polar subtangent is constant in the reciprocal spiral $r\theta = a$, and find the pedal equation of this curve.

5. (i) Find the asymptotes of the curve.

$$y^2(x^2 - a^2) = x.$$

(ii) Prove that for the curve $r^m = a^m \cos m\theta$ the radius of curvature is given by the expression

$$\rho = \frac{a^m}{(m+1)r^{m-1}}.$$

Examine the particular cases of a rectangular hyperbola ($m = -2$) and of a parabola ($m = -\frac{1}{2}$).

GROUP B.

6. (i) Prove the fundamental theorem of the integral calculus, namely,

$$\begin{aligned} \text{Lt } [f(x_0) \Delta x + f(x_1) \Delta x + \dots + f(x_{n-1}) \Delta x] \\ = \left[\int f(x) dx \right]_{x=a}^{x=b}, \end{aligned}$$

where $f(x)$ is a continuous function of x throughout the interval $a \leq x \leq b$, the interval being divided into n equal parts by the points $x_0 (= a), x_1, x_2, \dots, x_n (= b)$.

(ii) Calculate by this method the value of $\int_0^{\frac{\pi}{2}} \cos \theta d\theta$.

7. Obtain any three of the following integrals :

- (i) $\int \frac{\cos (\log x) dx}{x}$; (ii) $\frac{3x dx}{x^2-x-2}$;
- (iii) $\int x \sin x dx$; (iv) $\frac{dx}{.5+4 \sin x}$;
- (v) $\int \frac{dx}{\sqrt{(x^2+a^2)}}$.

8. Integrate and evaluate any **three** of the following :

- (i) $\int_0^{\infty} e^{-x} x^n dx$, where n is a positive integer ;
- (ii) $\int_0^{\infty} e^{-ax} \sin mx dx$;
- (iii) $\int_0^1 \sin^{-1} x dx$; (iv) $\int_1^2 \frac{dx}{x(1+2x)^2}$.

9. (i) Show how the area of a semicircle can be expressed as a definite integral.

(ii) Find the area of **one** loop of the curve
 $r^2 = a^2 \cos 2\theta$.

10. Find the length of an arc of the parabola $y = x^2$, measured from the vertex.

Calculate the length of the arc to the point (1, 1), given $\log (2 + \sqrt{5}) = 1.45$.

11. Solve any **two** of the following differential equations :

- (i) $(1+x) y dx + (1-y) x dy = 0$;
- (ii) $x dy - y dx + \sqrt{(x^2+y^2)} dx = 0$;
- (iii) $\frac{dy}{dx} + \frac{x}{1+x^2} y = \frac{1}{2x(1+x^2)}$.

12. Solve any **two** of the following differential equations :

- (i) $\frac{d^2y}{dx^2} - 7 \frac{dy}{dx} + 12y = 0$;
- (ii) $\frac{d^2y}{dx^2} - 2k \frac{dy}{dx} + k^2 y = e^x$;
- (iii) $\frac{d^2y}{dx^2} - 2 \frac{dy}{dx} + y = e^x$.

MATHEMATICS—PASS

THIRD PAPER

Not more than four questions from either group should be attempted.

Any six questions carry full marks.

GROUP A

1. Prove that the common surface of two heavy homogeneous liquids in equilibrium, which do not mix, is a horizontal plane.

A square is placed in liquid with one side in the surface. Show how to draw a horizontal line in the square dividing it into two portions, the thrusts on which are the same.

2. Find the conditions of equilibrium of a body partly immersed in a liquid and supported by a string attached to some point of it.

A uniform rod capable of turning about one of its ends, which is out of the water, rests inclined to the vertical with one-third of its length in some water. Prove that its specific gravity is $\frac{5}{3}$.

3. Find the centre of pressure of a triangle immersed in a liquid with a vertex in the surface and the opposite side horizontal.

Find the depth below the surface of a liquid of the centre of pressure of a rectangle, two of whose sides are horizontal and at depths a and b .

4. Find the specific gravity of a mixture of given weights of different substances whose specific gravities are given.

When equal volumes of two substances are mixed the specific gravity of the mixture is 4; when equal weights of the same substances are mixed the specific gravity of the mixture is 3. Find the specific gravities of the substances.

5. Describe Bramah's hydraulic press, explaining the hydrostatic principle which is utilized in it.

Explain the action of the siphon and find the conditions which must hold so that the siphon may act.

6. If the pressures of two gases of the same temperature and volume be p_1 and p_2 , find the pressure of the mixture of the two gases when the combined volume is v , the temperature being unaltered.

If the volume of a certain quantity of air at a temperature of 10°C , be 300 cub. cm., what will be its volume (at the same pressure) when its temperature is 20°C ?

GROUP B

7. Define the latitude of a place, and prove that the altitude of the celestial pole at any place, is equal to the latitude of the place.

Prove that the altitude of a star is 'greatest when on the meridian.

8. Describe the transit instrument, and explain how it is corrected for the various errors to which its readings are subject.

Given the zenith distances of a circumpolar star at its upper and lower transits, calculate the latitude of the place, and the star's declination.

9. Show how to find the coefficient of refraction by observing the apparent zenith distances of two circumpolar stars at their transits above and below the pole.

An altitude of a star is observed, and found to be the angle whose sine is $\frac{4}{5}$; calculate the true position of the star, assuming the amount of refraction at an altitude of 45° to be $58'2''$.

10. Explain the phenomenon of the seasons.

Explain what is meant by twilight, and prove that the duration of twilight depends upon the latitude of the place and the declination of the sun.

11. Describe Flamsteed's method of finding the right ascension of a star. What are its advantages, and how may the result be corrected owing to precession?

12. State the causes of a solar eclipse, and explain under what circumstances it is (i) total (ii) partial, and (iii) annular.

State the causes to which the equation of time is due; and establish length of afternoon—length of morning=twice the equation of time.

SANSKRIT—PASS

FIRST PAPER

1. Either, What was the mission of বনেচর? Why did he assume the garb of an ascetic? Give a summary of his speech.

Or, Give the বোধ্যবর্ধ (martial laws) to be followed by a king, as dictated by Manu.

2. Illustrate either সন্ধিত্ববিধং বিভ্রাজ্য বিগ্রহমেবচ । Or দুয়োদরচ্ছজিতাং সমীহতে, নয়েনজ্যেতুং জগত্য্ হবোধনঃ ।

3. Explain either in English Or in Sanskrit with reference to the context, either the Group A Or the Group B.

GROUP A

- (i) পরিভ্রমংলোহিতচন্দ্রনোচিতঃ পদাতিরন্তর্গিরিরেণুজ্বলিতঃ ।
মহারথঃ সত্যধনস্ত মানসং ছনোতি নো কচ্চিদয়ং বৃকোদরঃ ।
- (ii) ব্রাহ্মণান্ পয়ুপাসীৎ, প্রাতরুথায় পাথিবঃ ।
ত্রৈবিদ্যবুদ্ধান্ বিদ্বষন্তিষ্টেস্তেযাঞ্চ শাসনে ।
- (iii) সমমব্রাহ্মণে দানং দ্বিগুণং ব্রাহ্মণক্ৰবে ।
প্রাধীতে শতসাহস্রমনন্তং বেদপারগে ।

GROUP B

- (i) মতিভেদতমন্তি রোহিতে গহনে কৃত্যবিষ্টে বিবেকিনাম্ ।
অকৃতঃ পরিশুদ্ধ আগমঃ কুরুতে দোপ ইবার্ধদর্শনম্ ।
- (ii) নাস্তচ্ছিত্রঃ পরো বিভাৎ, বিভাচ্ছিত্রং পরস্ততু ।
গৃহেৎ কুর্শ্ব ইবান্ধানি, রক্ষেদ্বিবরমাক্ষনঃ ।
- (iii) শ্বে শ্বে ধর্ম্মে নিবিষ্টানাম্ সর্ব্বেষামনুপূর্ব্বণঃ ।
বর্ণানামাশ্রমাণাঞ্চ রাজা স্তোত্রভিরক্ষিতা ।

Why have ত্রৈবিদ্যবুদ্ধান্ and বিদ্বষঃ been separately used in (ii) in Group A ? Give the propriety of the word সত্যধনস্ত in (i) in Group A. What are the different আশ্রমসম্বন্ধে referred to in (iii) in Group B ? Expound the *samasas* in লোহিতচন্দ্রনোচিতঃ in (i) in Group A ; give its alternate form, if any ; account for অ in মহারথঃ in (i) in Group A ; account for the (ষষ্ঠী) sixth case-ending in তেযাং in (ii) in Group A and বর্ণানাম্ in (iii) in Group B ; derive পদাতি and ব্রাহ্মণক্ৰবে ; expound the *samasas* in অন্তর্গিরি and account also for the absence of the *samasanta* affix (i) in Group A.

4. Give explanatory notes on any four of the following :—

- (a) নহি প্রিয়ং প্রবক্তৃমিচ্ছন্তি যুবা হিতৈষিণঃ ।
- (b) ননু বক্তৃবিশেষবিশিষ্টা গুণগৃহ্য বচনে বিপশিষ্টঃ ।

- (c) अलिङ्गं न हिरण्यरेतसं चरमाङ्गलतिष्ठन्नाङ्गं जनः ।
 (d) प्रकृतिः खलु सा महीयसः सहते नाशसमृद्धिं यया ।
 (e) तीक्ष्णैश्च ब्रह्मन् श्राव्यं कार्यां वीक्ष्य महीपतिः ।
 (f) नृपानामङ्गबोधेयनिविष्टाः श्रद्धाः शिथिल्यते ।

5. Translate into English either (a) or (b) :—

(a)

ब्रह्मस्मिन्नेति मुच्यते; पराभवः भवति मायाविषु येन मायिनः ।

अविज्ञां हि शान्त्युपायविधानं असंभूताङ्गानि शिता इवेव यः ।

(b) क्रयविक्रयमन्थनं भक्तं सपरिवारं ।

योगक्षेमं संप्रेक्ष्य बनिजो दापयेत्करान् ।

6. Comment grammatically on only three of the underlined words :—

- (a) इयमिष्टं गुणारोचतां कृतिरर्थो भवतेऽपि भारती ।
 (b) जननाथ ! तवामुज्ज्वलनां कृतमाविष्कृतपौरुषैर्भूतैः ।
 (c) इदमिदं गनीदृगशयः असंभवं बलं मुपक्रमेतकः ।
 (d) अधितिष्ठति लोकमोजसा स विवशानिबन्धेन निपतिः ।

7. Translate into Sanskrit any five of the following :—

(a) He was too weak to talk. His mother was his constant attendant; and he was unwilling to be helped by any other person.

(b) Health is the most valuable of all earthly possessions, and without it all the rest are nothing and can give us no happiness.

(c) He had been a good king; he had worked night and day for the welfare of his subjects; he was not at all selfish, so had nothing to fear.

(d) There was no rainfall that year; rivers, lakes, and fountains dried up. There was not a speck of cloud in the sky, and thunder and lightning were unknown.

(e) Our little habitation was situated at the foot of a hill,

sheltered with a beautiful underwood behind and a prattling river before.

(f) You have no right to any earthly existence without doing work of some sort or other, unless you have an ample fortune whereon to live, clear of debt.

SANSKRIT—PASS

SECOND PAPER

1. Either, Account for the name 'Svapnavasavadattam' with appropriate references. Under what circumstances was Vasavadatta kept as a trust with Padmavati? How and when could Padmavati know the identity of Vasavadatta?

Or, Describe the scene of Dusyanta's repudiation of Sakuntala with special reference to the Purohita's advice in the matter. Quote or give in Sanskrit the substance of the *sloka* in which Sakuntala's disappearance is announced.

2. Translate into English either (a), (c), (e) Or (b), (d), (f) :—

(a) ধীরশ্রান্তমসংশ্রিতস্ত বসতন্তুস্ত বস্ত্রৈঃ ফলৈ

ম'নাহঁস্ত জনস্ত বকলবন্তস্তাসঃ সমুৎপত্তে ।

উৎসিজো বিনয়াদপেতপূরুষো ভাগ্যৈশ্চলৈর্বিম্বিতঃ

কোহয়ং ভো নিভৃতং তপোবনমিদং গ্রামীকরোত্যাজ্ঞয়া ।

(b) স্বপ্নায়তং হি মুখতোরণলোলমালাং

০ ভ্রষ্টাং ক্ষিতৌ স্বমবগচ্ছসি মূৰ্খ সৰ্পম্ ।

মন্দানিলেন নিশি বা পরিবর্তমানা

কিঞ্চিং করোতি ভুজগন্ত বিচেষ্টতানি ।

(c) অহমবজিতঃ পূৰ্বেং তাবৎ হৃদেঃ সহ লালিতো

দৃঢ়মপহুতা কস্তা ভূয়ো ময়া ন চ রক্ষিতা ।

নিধনমপি চ শ্রদ্ধা তস্তান্তথৈব ময়ি থতা

নমু বহুচিতান্ বৎসান্ প্রাপ্তং নৃপোহত্র হি কারণম্ ।

- (d) নীবারাঃ শুকগৰ্ভকোটরমুখত্রষ্টান্তরণামধঃ
 প্রস্নিগ্ধাঃ কচিদিদ্রুলোকলভিঃ সূচ্যন্ত এবোপলাঃ ।
 বিখাসো পগমাদভিন্নগতরঃ শব্দং সহস্তু যুগা
 স্তোয়াধারপঞ্চ বকলশিখানিস্তম্পরেখাকিতাঃ ।
- (e) যন্ত ত্বয়া ত্রণবিরোপণমিস্কন্ধীনাং
 তৈলং শুষিচ্যত মুখে কুশস্থিবিদ্ধে ।
 শ্রামাকমুষ্টি পরিবর্জিতকো জহাতি
 নোহয়ং ন পুত্রকৃতকঃ পদবীং যুগন্তে ।
- (f) রথেনামুচ্ছাতস্তিমিতগতিনা তীর্ণজলধিঃ
 পুরা সপ্তদ্বীপাং জয়তি বহুধামপ্রতিরথঃ ।
 ইহায়ং সত্বানাং প্রসজ্জদমনাং সর্বদমন.
 পুনর্ধাত্তাতাখ্যাং ভরত ইতি লোকস্ত ভরণাং ।

3. (a) Write a grammatical note on গ্রামীকরোতি.

(b) Derive ত্রষ্ট and বিরোপণ.

(c) Give the active form of শুষিচ্যত and the passive form of জহাতি.

(d) What grammatical anomaly do you find in the third line of (e) ? How can you solve it ?

(e) Comment on the *samasa* in তোয়াধারপঞ্চাঃ and on the use of লট in জয়তি in (f)

4. Answer any two of the following :—

(a) দুঃখং জ্ঞাসন্ত রক্ষণম্ । Expand the idea. Where in the *Sakuntala* is the idea more clarified ?

(b) শরচ্ছশাক্গোরোণ বালাবিক্রেন ভামিনী ।

কাশপুশ্পলবেনেদং সাজ্জপাতং যুগং মম ।

What was the real cause of Udayana's tears ? Why does he feel the necessity of resorting this trick ?

(c) Give in Sanskrit the meanings of any four of the following expressions :—

সমুদাচারাঃ, অত্যাহিতম্, অবধীরণা, অপদেশঃ, পুরোভাগ্য, উপরাসঃ, and অনুশয়ঃ.

5. Turn into prose order **either** of the following *slokas* and give the substance thereof **either** in English or in Sanskrit :—

(a) মহাভাগঃ কামঃ নরপতিরভিন্নস্থিতিরসৌ-

ন কশ্চিৎপর্ণানামপথমপকৃষ্টোহপি ভজতে ।

তথাপীদং শতংপরিচিতবিবিক্তেন মনসা

জনাকীর্ণং মস্ত্রে হতবহপরীতং গৃহ্মিব ।

(b) প্রচ্ছাত্ত রাজমহিষীং নৃপতেহিতার্থং

কামঃ ময়া কৃতমিদং হিতমিত্যবেক্ষ্য ।

সিদ্ধেহপি নাম মম কৰ্ম্মণি পার্শ্বিষোহসৌ

কিং বক্ষ্যতীতি হৃদয়ং পরিশঙ্কিতং মে ।

Give the লট্ form of the root of বিভিন্ন (third person, singular) and the লিট্ form of the root of হিত (second person, plural).

6. Explain fully, with reference to the context, and two of the following :—

(a) সত্যং হি সন্দেহপদেষু বস্তুৰ্ণু প্রমাণমন্তঃ করণপ্রবৃত্তয়ঃ ।

(b) এবৈ গাম অণুজ্জহে জে গুলাদৌ অবদালিঅ হংখিক্কে
পডিটাবিদে ।

(c) ততো নিজ্ঞাস্তে রাজনি প্রোষিতনক্ষত্রচন্দ্রমিব নভো-
হরমণীয়ঃ সংবৃত্তঃ স গ্রামঃ ।

(d) গুণানং বা বিশালানাং সংকারাগাঞ্চ নিত্যশঃ ।

কর্তারঃ স্থলভা লোকে বিজ্ঞাতারস্ত্ব দুর্লভাঃ ।

7. Render into Sanskrit :—

অগ্নিঃ এক সংবৃত্তঃ । কস্মি বি পূজারিহে অবরদ্ধা স্মৃতিঅ। সউদ্দল।
গৃহ যস্মি কস্মি বি । এসৌ দুবাসৌ স্থলহকোবো মহেসৌ তহ সবিঅ পডিগিউত্তো । কো
অস্মো হতবহাদৌ দহিন্তঃ পভবিসৃদ।

8. Translate into Sanskrit any five of the following extracts :—

(a) He was not instructed by his ministers, but gave them instructions ; the diamond is not cut by any other precious stones, but it cuts them.

(b) Virtues naturally opposed, such as forbearance and valour, equally served him, just as the different seasons equally serve the celestial garden.

(c) When he had given his answer, the king went to his home and bought up the hut with money. For those who desire happiness, there is no false pride.

(d) At the bidding of his guru, he who was free from desires with reluctance consented to rule the country which had no king.

• (e) The snake keeps himself alive by feeding on air, lies in a hole of blinding darkness, and guards the treasures for another's sake.

(f) He had eyes resembling lotuses, was learned and pious ; in order to increase his merits he founded a temple of Siva at Benares.

SANSKRIT—PASS

THIRD PAPER

1. Translate into English any two of the following Passages :—

(a) सत्वे प्रतिपालय माम्, अहमपि भवन्तमनुयात्रामि न शक्नोमि भवन्तं विना कणमपावहातुम् एकैकौ । कथमपरिचित इव अदृष्टपूर्वं इवाद्यं मामेकपदे उन्मज्जाप्रदासि, कुतश्चवेयमतिनिष्ठुरता, कथं वदते कं गच्छामि, कं वाटे कं शरणमुपैमि । अक्षोहस्मि संवृत्तः शुभ्राम् दिशो जाताः निरर्थकं जीवितं निःसुखाः लोकाः ।

(b) प्रलायामय ईवोदतिर्धर्मस्तुर्धाप्नोषेणानाम् जलयस्त्रागीवामुचास्तुःप्रवाहाणाम् प्रयोहा इव निरगच्छन् प्रलापानाम् शिथरशतानीवावधस्तु दुःखानाम् प्रभृतय ईवोदपदास्तु मूर्छानाम् । ईतेवमास्तु कृतास्तुमावेदयस्तु । एव तस्याः समतिक्रान्तुः कथमपि अतिकष्टमवस्तुश्रममनुभवस्तु । इव चेतनां जहार मूर्छा ।

(c) वेगान्निपतन्तीः च शिलातले तां समुद्रमं प्रसारितकरः परिजन इव जातपीड्यन्तप्रीडः विभूतवान् । अश्रुजलाऽर्धेण च तदीयेनैवोत्तरीय वस्त्रप्रोक्षेण शनैः शनैर्वीजयन् सं जातं ग्रहितवान् । उपजातकारुण्यं च वापसलिलोत्थोडेन प्रत्यालामानकपोलमुगलः लक्ष्मणेनैव ।

2. Correct or justify any three of the following passages, adding suitable notes :—

- (a) शङ्कां कुर्यान्मा अहिम्नं धनुम् ।
- (b) विस्माययन् विस्मितमाश्रवात् ।
- (c) समूहा गर्दभी भारं वहति ।
- (d) शकां श्वांसादिभिरेपि क्रयतिहस्तम् ।
- (e) वृक्षं वृक्षं प्रतिष्ठति उद्यानपालः ।
- (f) सदृष्टेऽलक्षणे तत्र शूर्पनखान्नकानने ।

3. (a) Account for the case-ending in any four of the words underlined :—

चर्माणि द्विपिनं हस्तिः ; अति देवान् कृष्णः ; मायान् अस्मै तिलेभ्यः प्रतिबद्धति ; कञ्जामलकरिकुः ; भोजनारम्भ गच्छति कञ्जया शोकः ।

(b) Expound any five of the following *samasas*, explaining any seeming irregularities :—

किं सन्धा, त्रैमास्यः, केशाकेशि, लक्षणहेतु, अदक्षिणीकृत्य, अत्यक्षः, सङ्क्रिया, परम्परः ।

(c) Conjugate the following roots :—धा in लृट्, कृ in लिट्, अस् in लृङ्, निषद् in लङ्.

(d) Decline पथिन् in the third person and dative singular, जरा in the third person singular, बिम्बा in the locative singular.

(e) Distinguish clearly between सङ्धि and समास and classify the *samasas*.

4. Either Enumerate the names of the *puranas* and give a detailed description of the *Visnu-purana*.

Or, Compare and contrast the structure of the *Mahabharata* and the *Ramayana*.

5. Write a short account either of the post-Kalidasian epic or of the prose romances and the *campu*.

6. Write short notes on any five of the following :—
Vagbhatalkara, Vakroktijivita, Subhasitavali, Setubandha, Rajatarangini, Kavyamimamsa, Khandanakhandakhadya, Harsacarita, Brhatkathamajari, Avantisundarikatha.

HISTORY—PASS

FIRST PAPER

Six questions are to be attempted.

1. Comment critically on any **one** of the following :—

(a) 'India possesses a deep underlying fundamental unity far more profound than that produced either by geographical location or by political suzerainty. That unity transcends the innumerable diversities of blood, colour, language, dress, manners, and sect.'

(b) 'Few students of Indian history will be disposed to dispute the proposition that the most conspicuous and interesting names in the long roll of Indian monarchs are those of Asoka and Akbar.'

2. Discuss the chronology of the Andhra dynasty and enumerate the exploits of Gautamiputra Satakarni.

3. Sketch the career **either** of Samudragupta or of Pulakesin II Chalukya (of Valabhi).

4. Give a short account of the Pallavas of Kanchi with special reference to the reign of Narasimhavarman.

5. Write critical notes on any **three** of the following :—(a) Art under the Guptas ; (b) the Ajanta cave paintings ; (c) the foundation of the Pala kingdom ; (d) the fall of the Gurjara-pratiharas ; (e) the three Tamil States of S. India ; (f) the Yueh-Chi migration ; (g) the rise of Mahayana Buddhism.

6. Attempt an estimate of Sultan Muhammad bin Tughlaq as a ruler. Account for his failure. What does Barni say of him.

7. Sketch the socio-religious life of India under the Turco-Afghans.

8. Give a short account of Sher Shah. Estimate his place in the administrative history of India.

9. Sketch the history of the Hindu national resurrection in the in the seventeenth century and discuss its consequences, with special reference to the Marathas, the Rajputs, and the Sikhs.

10. Write critical notes on any **three** of the following :—the battle of Fatepur Sukri (Khanua) ; (b) autobiography of Babar ; (c) Muslim historians of the Turco-Afghan period ; (d) decay of Portuguese power in Bengal ; (e) Mir Zumla ; (f) the Jiziya ; (g) foundation of the Bahamani Kingdom.

11. Attempt a critical estimate of the statesmanship **either** of Warren Hastings or of Lord Dalhousie.

12. Give a short account of the growth of self-government in

British India from 1857 to the passing of the Government of India Act 1919.

13. Elucidate any **one** of the following statements :—

(a) 'Buxar deserves far more than Plassey to be considered as the origin of British power in India.

(b) 'The execution of Nandakumar was a grave miscarriage of justice, if not a judicial murder'.

(c) 'The policy of Dupleix required a national—not a Company's—support. But as the former was lacking his efforts ended in failure'.

(d) 'We have no right to seize Sind ; yet we shall do so, and a very advantageous, useful, and humane piece of rascality it will be.'

14. In the sketch-map demarcate the extent of the possessions of the British and the Marathas in 1795.

15. Write critical notes on any **three** of the following :—(a) the doctrine of lapse ; (b) the policy of Nana Farnavis ; (c) the battle of Sobraon ; (d) the Panjdeh affair ; (e) the battle of Maiwand ; (f) legality of the annexation of the Punjab ; (g) Freedom of the Press in India.

HISTORY—PASS

SECOND PAPER. (MODERN EUROPE)

Candidates will answer six questions only.

1. Give the main provisions of the Treaty of Westphalia.

2. 'Richelieu was one of the mightiest men of affairs in the world's history' (SACRIT). Discuss.

3. Give an account of the financial and commercial reforms of Colbert. Were they successful ? Give reasons for your answer.

4. 'Louis XIV as the true heir of the policy of Richelieu was responsible for the French Revolution' (SACRIT). Explain.

5. Trace the story of the decline of the Turks from 1683 to 1713. Discuss the causes of the decline.

6. Write notes on any **two** of the following :—(a) the Aulic Council ; (b) Mazarin ; (c) Louis XIV's 'Reunion policy' ; (d) Marlborough.

7. Give an account of the reforms and the foreign policy of Peter the Great of Russia.

8. 'The Peace of Utrecht introduced a new epoch in the history of diplomacy.' Explain.

9. 'The situation producing the Seven Years' War was composed of three rivalries' (GUEDALLA). Discuss.

10. Narrate the story of the partitions of Poland. What were their consequences?

11. 'Napoleon's Empire was not an interruption but an extension of the Revolution' (GUEDALLA). Explain fully.

12. Discuss the causes of the downfall of Napoleon.

13. Write notes on any **four** of the following :—

(a) Kaunitz; (b) the battle of the Nile; (c) the *Code Napoleon*; (d) the Peace of Tilsit 1807; (e) the Lines of Torres Vedras; (f) the Confederation of the Rhine.

HISTORY—PASS

THIRD PAPER

Note more than six questions to be attempted.

1. Give a brief account of the European settlement of 1815.

2. Review the character and career of Louis Napoleon (Napoleon III).

3. 'Politically speaking there was no Italy during the year 1815—50.' Explore the truth in this statement.

4. Tell the story of the unification of Germany in the nineteenth century.

5. Form an estimate of the reforms of the Tsar Alexander II.

6. How far were the attempts of European statesmen to solve the Eastern question in 1856 and 1878 crowned with success?

7. Compare the foreign policy of the Kaiser William II with that of Bismarck.

8. 'The great working-class movement in all its aspects is one of the dominant features of the period immediately preceding the War of 1914.' Discuss this statement.

9. 'What we seek is a reign of law, based upon the consent of the governed and sustained by the organized opinion of mankind.' How far did the treaties of Versailles and Sevres accord with this ideal of President Wilson?

10. Estimate the importance of sea-power in the World War of 1914—18.

11. 'The Monroe Doctrine was a hint of Pan-Americanism and an appendix to the Declaration of Independence.' Explain.

12. What main factors—political and economic—influenced the course of Japanese history during the period 1895–1915?

PHILOSOPHY—PASS

First Paper. Psychology

Answer any five questions.

1. Exhibit the scope of psychology. Indicate its place in a system of philosophy. Discuss fully its relation to metaphysics.

2. Describe the structure and functions of (a) nerves, and (b) neurones. Briefly state the physiological processes corresponding to elementary psychical states.

3. Can consciousness be defined? If not, why not? How would you describe it? What are its characteristics? How would you establish the unity of conscious life?

4. State, explain, and illustrate Weber-Fechner law. What objections can be made to it?

5. Distinguish between sensation and perception. Analyse the process of perception. What are the acquired perceptions of sight? Explain how the child comes to have any **two** of them.

6. Explain clearly how the child comes to perceive time as succession and duration. What is the part played by memory and expectation in connexion with a clear apprehension of time?

7. Explain the nature of thought. What are the categories of judgement? Show how the ideas of any **two** of them are formed. Discuss the relation of judgement to (a) conception, and (b) reasoning.

8. State clearly the different stages in the development of (a) the idea of the self, and (b) the idea of the external world.

9. State, explain, and illustrate any **two** laws of pleasure and pain. Examine fully **one** of the laws you state. Is pleasure only the negation of pain? Discuss.

10. What are the different forms of sympathy? Explain and illustrate them. Analyse sympathy as peculiarly human emotion. Under what conditions does real sympathy become possible?

11. Distinguish between (a) spontaneous and reflex actions, (b) appetite, impulse, and desire. Analyse desire.

12. Explain and illustrate ideo-motor actions. What is the relation between them and imitative movements of children ? Discuss the relation between imitation and play.

PHILOSOPHY—PASS

Second Paper

Answer any five questions.

1. A science is admittedly a systematic investigation into some aspect of Nature. What, then, is exactly meant when we say that ethics is a science ?

2. Distinguish between ethics and psychology. Is training in psychology a necessary preliminary to ethical investigation ?

3. In the ordinary course of life we are guided by pleasure. We ought to follow it, therefore, as the ultimate end of our life. Do you agree ? Discuss.

4. 'Altruism is only magnified egoism.' A philanthropist is therefore to be denounced as an egoist. Do you agree ?

5. Moral laws or standards vary from age to age, and from country to country. Is it then that there is nothing constant in our moral consciousness ?

6. A person finds himself in such circumstances that he cannot in any way earn a living ; he is consequently faced with starvation and death. To save his life, and also his family, he commits burglary in the house of his neighbour. How would you judge his conduct ? Give reasons for your answer.

7. Write short notes on—moral ideal, casuistry, hedonism, asceticism.

PHILOSOPHY—PASS

Third Paper

Answer any five questions.

1. What is the nature of philosophical knowledge ? 'No philosophy can be more than an hypothesis.' Discuss this statement.

2. Explain clearly the meaning of evolution. How would you distinguish between mechanical and teleological evolution ?

3. Explain the meaning of scepticism as distinguished from criticism. 'Scepticism is the basis of all sound philosophy.' Examine this statement.

4. Explain the nature of the self. Has the self any causality of its own apart from the causality of its states and processes ?

5. Is the human will free ? How far is the concept of freedom reconcilable with the idea of causality ?

6. 'Reality is a unity, an absolute unity of everything spiritual and good.' Examine the grounds on which this idealistic monism rests.

7. How is the idea of God necessitated by the belief in the future existence of the self ? State the main arguments in support of such a belief in future life.

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ECONOMICS—PASS

First Paper

Answer any six questions.

1. What do you understand by 'elasticity of demand' ? Illustrate your answer by examples.

2. Discuss the functions and utility of Trade Unions.

3. Examine the influence of credit on prices.

4. Examine the theory of international values.

5. Explain what is meant by the quantity theory of money.

6. How do you define 'taxation' ? Discuss the merits and defects of direct and indirect taxes.

7. What do you understand by specie points ? How are they arrived at ?

8. Discuss the chief causes of industrial crises. What are the best means of preventing such occurrences ?

9. What is the function of a central bank in the currency and banking system of a country ?

ECONOMICS—PASS

Second Paper

Answer any six questions.

1. What is meant by government ?

To what extent does the authority of government ultimately rest on force ?

2. What is law ? How does it differ from ethics ?

Examine the following statement :—‘There is a common legal conscience in mankind.’

3. Should there be any limits to State action ? If so, where would you put the limits ?

4. Have the arguments usually urged in favour of the bicameral system of legislature any real value ?

Do you think there was any justification for creating a second chamber in some of the Indian provinces ?

5. Describe the present constitutional status and powers of the English Cabinet in relation to both the Crown and Parliament.

6. Explain the difference between the Cabinet and the Council of Ministers in France, and examine the character of ministerial responsibility in that country.

7. Discuss the relation of Executive to the Legislature in the federal sphere in the U. S. A.

Has the present arrangement any defects ?

8. Examine the nature of the legislative powers vested in the governor-general by the Government of India Act, 1935.

9. Discuss the position and powers of the governor in relation to his ministers under the present Constitution of India.

ECONOMICS—PASS

THIRD PAPER

Answer any six questions.

1. Discuss the conditions under which products of handicrafts can compete with machine-made goods. Illustrate your answer from Indian industries.

2. In India there is really no problem of overpopulation at the present time.’ Examine this view.

3. Indicate generally the principles on which land revenue assessment is made in *ryotwari* areas.

4. Describe the measures which have been adopted since the Great European War to promote the welfare of industrial labour in India.

5. Account for the fall in the gold value of the rupee during the

seventies of the last century. Estimate its effect on Indian trade and finance.

6. Describe the principal features of the Gold Exchange Standard. What led to its break down in India during the War?

7. Describe the present arrangement for the issue and regulation of paper currency in India.

8. Mention the chief articles of India's import and export trade and discuss their economic importance.

9. Describe the scope and importance of the Indian income tax.

ENGLISH—PASS

FIRST PAPER

1. *Either*, Describe the character of Celia, and show that on the whole 'she serves as a foil to Rosalind'.

Or, What are the moral lessons specially emphasized in *As You Like It*? Give illustrative references in support of your answer.

2. *Either*, Discuss the character of Jaques. Does his 'melancholy' deserve admiration, or pity, or censure?

Or, Write a short note on the witches in *Macbeth*. In what respects do they differ from the witches of popular superstition?

3. *Either*, To what extent were the 'supernatural soliciting' and the evil influence of Lady Macbeth responsible for the ruin of Macbeth?

Or, Point out the main deviations from Holinshed in *Macbeth*, and indicate the dramatic purposes served by them.

4. *Either*, Give an outline of *Stanzas Written in Dejection near Naples*, and point out any special characteristics of the poet that the poem illustrates.

Or, Develop in the form of a short essay the central thought in the poem *The Inner Vision*.

5. Explain any **four** of the following :—

(a) Dear child ! dear girl ! that walkest with me here,

If thou appear untouch'd by solemn thought,

Thy nature is not therefore less divine :

Thou liest in Abraham's bosom all the year,

And worshipp'st at the Temple's inner shrine,

God being with thee when we know it not.

(b) Out, out, brief candle !

Life's but a walking shadow, a poor player

That struts and frets his hour upon the stage, •

And then is heard no more ; it is a tale

Told by an idiot, full of sound and fury,

Signifying nothing.

(c) Here feel we but the penalty of Adam,

The seasons' difference ; as, the icy fang

And churlish chiding of the winter's wind,

Which, when it bites and blows upon my body,

Even till I shrink with cold, I smile and say

'This is no fluttery : these are counsellors

That feelingly persuade me what I am.'

(d)

Present fears

Are less than horrible imaginings ;
 My thought, whose murder yet is but fantastical,
 Shakes so my single state of man that function
 Is smother'd in surmise, and nothing is
 But what is not.

(e)

Perhaps the self-same song that found a path
 Through the sad heart of Ruth, when, sick for home,
 She stood in tears amid the alien corn ;
 The same that oft-times hath
 Charm'd magic casements, opening on the foam
 Of perilous seas, in faery lands forlorn.

(f) (i) I'll go sleep if I can ; if I cannot, I'll rail against all the first-born of Egypt.

(ii) According to the fool's bolt, sir, and such dulect diseases.

(iii) I was never so be-rhymed since Pythagoras' time, that I was an Irish rat.

SECOND PAPER

1. *Either*, What do you know about Swift's 'dreadful humour and invective' ?

Or, Why does Edmund Gosse call Robert Louis Stevenson 'the most inspiring, the most fascinating human being' ever known to him ?

2. *Either*, Why is Zebek-Dorchi called the author and originator of the great Tartar Exodus ?

Or, What do you understand by 'impassioned prose' ? Discuss the applicability of this expression to the *Dream Fugue*.

3. *Either*, Describe 'the moderate and comprehensive policy' of Rome, and show how it conduced to the unity of the Roman empire.

Or, Discuss Lafcadio Hearn's explanation of Japan's political success and economic development.

4. *Either*, Give the substance of David's description of God as the Divine Shepherd, the All-Compassionate, the Omniscient and the Omnipresent.

Or, What do you know about St. Paul before and after his conversion ? Do you agree with the view that he had been called to be an apostle to the Gentiles ? If so, what information can you gather on this point from your text ?

5. Explain with reference to the context four passages, taking one only from each group :—

GROUP A.

(i) This noble argument, alike worthy of the man and the occasion, is doubtless over-clouded and disfigured by personal abuse of Salmasius, whose relations with his wife had surely as little to do with the head of Charles I as had poor Mr. Dick's memorial.

(ii) He compels us to say Ah ha ! among the trumpets, and say it even to his own.

GROUP B.

(iii) Without the most furious haste on the part of the Kal-mucks, there was not a chance for them, burdened and 'trashed' as they were, to anticipate so agile a light cavalry as the Cossacks in seizing this important pass.

(iv) To robbers, the answer is packed up and ready for delivery in the barrel of the guard's blunderbuss. Rats again ! there *are* none about mail-coaches, any wore than snakes in Von Troil's Iceland ; except, indeed, now and then a parliamentary rat, who always hides his shame in what I have shown to be the 'coal cellar.'

GROUP C.

(v) Half-a-dozen men, with one day's work could...make..... every glittering wave medicinal, as if it ran, troubled only of angels, from the porch of Bethesda.

(vi) There was never any Kingdom of Barataria ; but the hearts of all who knew him were set on seeing how Sancho would comport himself in the office of Governor.

GROUP D.

(vii) Or ever the silver cord be loosed, or the golden bowl be broken, or the pitcher be broken at the fountain, or the wheel broken at the cistern.

Or, Before the silver cord be broken, and the golden fillet shrink back, and the pitcher be crushed at the fountain, and the wheel be broken upon the cistern.

(viii) And the voice spake unto him again the second time, What God hath cleansed, that call not thou common.

Or, And the voice spoke to him again the second time : That which God hath cleansed, do not thou call common.

THIRD PAPER

1. Write an essay on **one** of the following subjects :—

- (a) Education, its means and end.
- (b) Educative value of Broadcasting.
- (c) The advantages and defects of a despotic form of Government.

2. Give the substance of **one** of the following passages :—

(a) He had been accustomed (he said) to hear even from his childhood a divine voice ; interfering at moments when he was about to act, in the way of restraint, but never of instigation. Such prohibitory warning was wont to come upon him often, not only on great but even on small occasions, intercepting what he was about to do or say. Though later writers speak of this as the Genius of Socrates, he himself does not personify it, but treats it merely as a 'divine sign, a prophetic or supernatural voice'. He was accustomed not only to obey it, but to speak of it publicly and familiarly to others, so that the fact was well known both to his friends and to his enemies. It had always forbidden him to enter on public life ; it forbade him, when the indictment was hanging over him, to take any thought for a prepared defence ; and so completely did he march with a consciousness of this bridle in his mouth, that when he felt no check, he assumed that the turning he was about to take was the right one. Though his persuasion was unquestionably sincere and his obedience constant, yet he never dwelt upon it himself as anything grand or awful, entitling him to peculiar defence ; but spoke of it often in his usual strain of familiar playfulness.

(b) The greatest impediment to free intercourse between nations is neither distance, nor the difference of mental habits, nor the opposition of national interests ; it is simply the imperfect manner in which languages are usually acquired, and the lazy contentment of mankind with a low degree of attainment in a foreign tongue when a much higher degree of attainment would be necessary to any efficient interchange of ideas. It seems probable that much of the future happiness of humanity will depend upon a determination to learn foreign languages more thoroughly. International ill-will is the parent of innumerable evils. From the intellectual points of view it is a great evil, because it narrows our range of ideas and deprives us of light from foreign thinkers. From the commercial point of view it is an evil, because it leads a nation to deny itself conveniences in order to avoid the dreaded result of doing good to another country. From the political point of view it is an enormous evil, because it leads nations to make

war upon each other, and to inflict and endure all the horrors, the miseries, the impoverishment of war, rather than make some little concession on one side or on both sides that would have been made with little difficulty if the spirit of the two countries had been more friendly. May we not believe that a more general spirit of friendliness would result from personal intercourse, and that this would be the consequence of more thorough linguistic acquirement ?

3. Give the meaning of **one** of the following :—

(a) Say not the struggle naught availeth,

The labour and the wounds are vain,
The enemy faints not, nor faileth,
And as things have been they remain.

If hopes were dupes, fears may be liars ;

It may be, in yon smoke conceal'd,
Your comrades chase e'en now the fliers,
And, but for you, possess the field.

For while the tired waves, vainly breaking,
Seem here no painful inch to gain,
Far back, through creeks and inlets making,
Comes silent, flooding in, the main.

And not by eastern windows only,
When daylight comes, comes in the light ;
In front the sun climbs slow, how slowly !
But westward, look, the land is bright !

(b) Vain, very vain, my weary search to find
That bliss which only centres in the mind.
Why have I strayed from pleasure and repose,
To seek a good each government bestows ?
In every government, though terrors reign,
Though tyrant kings or tyrant laws restrain,
How small, of all that human hearts endure,
That part which laws or kings can cause or cure ;
Still to ourselves in every place consigned,
Our own felicity we make or find :
With secret course, which no loud storms annoy,
Glides the smooth current of domestic joy.
The lifted axe, the agonizing wheel,
Luke's iron crown, and Damians' bed of steel,
To men remote from power but rarely known,
Leave reason, faith, and conscience all our own.

MATHEMATICS—PASS

FIRST PAPER

Answer six questions only, three from each group.

Group A.

1. (i) If $\cos A = \tan B$, $\cos B = \tan C$, $\cos C = \tan A$, prove that $\sin A = \sin B = \sin C = 2 \sin 18^\circ$.

(ii) Solve the equation :

$$\cos 3x + \cos 2x + \cos x = 0.$$

2. (i) Eliminate θ from the equations

$$\frac{\cos^3 \theta}{\cos(\alpha - 3\theta)} = \frac{\sin^3 \theta}{\sin(\alpha - 3\theta)} = m.$$

(ii) If the circum-centre lies on the in-circle, prove that $\cos A + \cos B + \cos C = \sqrt{2}$.

3. (i) Prove that

$$\tan^{-1} 1 + \tan^{-1} 2 + \tan^{-1} 3 = \pi = 2(\tan^{-1} 1 + \tan^{-1} \frac{1}{2} + \tan^{-1} \frac{1}{3}).$$

(ii) Prove that

$$\tan(\tan^{-1} x + \tan^{-1} y + \tan^{-1} z) = \cot(\cot^{-1} x + \cot^{-1} y + \cot^{-1} z).$$

4. (i) Determine all the values of

$$(\cos A + i \sin A)^{1/p},$$

where $i = \sqrt{-1}$.

(ii) Solve $x^7 = 1$ by the help of De Moivre's theorem.

5. (i) Sum to n terms the series

$$\sin \alpha - \sin(\alpha + \beta) + \sin(\alpha + 2\beta) - \dots$$

(ii) Sum to infinity the series

$$\cos \theta - \frac{1}{2} \cos 2\theta + \frac{1}{3} \cos 3\theta - \dots$$

6. (i) Expand $\sin x + \cos x$ in powers of x .

(ii) If $\tan x = n \sin \alpha / (1 - n \cos \alpha)$, where n is less than unity, prove that

$$x = n \sin \alpha + \frac{1}{2} n^2 \sin 2\alpha + \frac{1}{3} n^3 \sin 3\alpha + \dots$$

Group B.

7. (i) Determine the nature of the triangle whose vertices are the points $(0, 0)$, $(3, \frac{1}{2}\pi)$, and $(3, \frac{1}{3}\pi)$, and calculate its area.

(ii) Find the locus of a point which moves so that its distance from the axis of y is double the distance from the point $(2, 2)$.

8. (i) Prove that the diagonals of the parallelogram formed by the four straight lines

$$\frac{x}{a} + \frac{y}{b} = 1, \quad \frac{x}{b} + \frac{y}{a} = 1,$$

$$\frac{x}{a} + \frac{y}{b} = 2, \quad \frac{x}{b} + \frac{y}{a} = 2.$$

are at right angles to one another.

(ii) Find the value of h so that the equation

$$12x^2 + hxy + 2y^2 + 11x - 5y + 2 = 0$$

may represent two straight lines, and find the angle between them.

9. (i) Prove that the straight line $x + y = 2 + \sqrt{2}$ touches the circle $x^2 + y^2 - 2x - 2y + 1 = 0$, and find its point of contact.

(ii) Find the equation to the circle which cuts orthogonally the three circles

$$x^2 + y^2 = a^2,$$

$$(x - c)^2 + y^2 = a^2,$$

$$x^2 + (y - b)^2 = a^2.$$

10. (i) Two equal parabolas have the same vertex and their axes are at right angles; prove that the common tangent touches each at the end of a latus-rectum.

(ii) Two equal parabolas, A and B, have the same vertex and axis, but have their concavities turned in opposite directions; prove that the locus of poles with respect to B of tangents to A is the parabola A.

11. (i) Find the locus of the points of intersection of the tangents of an ellipse, which meet at right angles.

(ii) Show that the diameters whose equations are

$$y + 3x = 0 \text{ and } 4y - x = 0$$

are conjugate diameters of the ellipse $3x^2 + 4y^2 = 5$.

12. (i) Prove that the difference of the focal distances of any point on the hyperbola is equal to the transverse axis.

(ii) Prove that the portions of any line which are intercepted between the asymptotes and the curve are equal.

(iii) Show how any given angle may be trisected with the help of a hyperbola of eccentricity 2.

SECOND PAPER

Only six questions are to be attempted, of which not more than three must be from one group.

Group A.

1. (i) Define the differential coefficient of a function and from your definition find the differential co-efficient of $\log_a x$.

(ii) Find $\frac{dy}{dx}$ of any two of the following :—

$$(1) y = \tan x + \frac{1}{3} \tan^3 x, \quad (2) y = \tan^{-1} \frac{2x}{1-x^2},$$

$$(3) x^4 + x^2 y^2 + y^4 = 0.$$

2. (i) If $p = x \cos \alpha + y \sin \alpha$ touch the curve

$$\frac{x^m}{a^m} + \frac{y^m}{b^m} = 1,$$

prove that

$$p^{m/(m-1)} = (a \cos \alpha)^{m/(m-1)} + (b \sin \alpha)^{m/(m-1)}.$$

(ii) Find the pedal equation of the parabola

$$\frac{2a}{r} = 1 - \cos \theta.$$

3. (i) Find the asymptotes of the cubic curve

$$y^3 - xy^2 - x^2y + x^3 + x^2 - y^2 = 1.$$

(ii) For the tractrix $s = c \log \sec \psi$, prove that

$$\rho = c \tan \psi,$$

where ρ is the radius of curvature of the curve.

4. (i) If $e^x = \cosh \left(\frac{1}{m} \log y \right)$,

prove that $(x^2 - 1) \frac{d^2 y}{dx^2} + x \frac{dy}{dx} - m^2 y = 0$.

(ii) Show that $\frac{x^2 - 7x + 6}{x - 10}$ has a maximum value when $x = 4$, and a minimum value when $x = 16$.

5. (i) If $y = e^{ax} \sin (bx + c)$, find $\frac{d^n y}{dx^n}$.

(ii) Show that

$$e^{\sin x} = 1 + x + \frac{1}{2}x^2 - \frac{1}{6}x^3 + \dots$$

6. (i) Define a definite integral as the limit of a sum, and deduce

$$\text{the value of } \int_a^b e^{-x} dx.$$

(ii) Evaluate

$$\lim_{n \rightarrow \infty} \left\{ \frac{1}{n+1} + \frac{1}{n+2} + \dots + \frac{1}{n+n} \right\}.$$

Group B.

7. Find any **three** of the following :—

$$(i) \int \frac{dx}{20-5x^2}; \quad (ii) \int \frac{e^{\tan^{-1} x} dx}{1+x^2}; \quad (iii) \int x \log x dx;$$

$$(iv) \int \frac{dx}{\sqrt{3+3x+x^2}}; \quad (v) \int \frac{\sqrt{(\tan x)}}{\sin x \cos x} dx.$$

8. Evaluate any **three** of the following :—

$$(i) \int_0^{\frac{1}{2}\pi} \sin^2 x \cos^3 x dx; \quad (ii) \int_0^{\frac{1}{2}\pi} \frac{\cos x dx}{(1+\sin x)(2+\sin x)};$$

$$(iii) \int_0^{\frac{1}{2}\pi} \frac{dx}{1+2 \cos x}; \quad (iv) \int_0^{\infty} \frac{dx}{(x^2+a^2)(x^2+b^2)}.$$

9. (i) Show that in the catenary $y = c \cosh \frac{x}{c}$, the length of arc from the vertex (where $x=0$) to any point is given by

$$s = c \sinh \frac{x}{c}.$$

(ii) Show that the intrinsic equation of the catenary $y = c \cosh \frac{x}{c}$ is $s = c \tan \psi$.

10. (i) Find the whole area of the cardioid

$$r = a(1 + \cos \theta)$$

(ii) The curve $r = a(1 + \cos \theta)$ revolves about the initial line. Find the surface of the figure formed.

11. (i) Find the general equation of the curve whose subtangent is n times the abscissa of the point of contact.

(ii) Solve any one of the following differential equations :—

$$(1) (1+x^2) \frac{dy}{dx} + 2xy = 4x^2 ;$$

$$(2) y^2 + x^2 \frac{dy}{dx} = xy \frac{dy}{dx}.$$

12. Solve any two of the following differential equations :—

$$(i) \frac{d^2y}{dx^2} - y = e^{2x} ;$$

$$(ii) \frac{d^2y}{dx^2} - 4 \frac{dy}{dx} + 3y = 2e^{3x} ;$$

$$(iii) \frac{d^2y}{dx^2} - 4 \frac{dy}{dx} + 4y = 0.$$

THIRD PAPER

Answer six questions only, not more than four from the same group.

Group A.

1. Prove that the pressure at any point of a fluid at rest is the same in all directions.

12 lb. wt. of a liquid of specific gravity 1.1 is mixed with 20 lb. wt. of a liquid of specific gravity 0.9 ; what is the specific gravity of the mixture ?

2. Prove that the whole pressure on a plane surface immersed in a liquid is equal to $\omega S \bar{z}$, where S is the area of the plane surface and \bar{z} is the depth of its centre of gravity below the surface of the liquid, the pressure of the air being neglected.

Find the total thrust on a rectangle, whose sides are a and b , the side a being horizontal and at a depth c below the surface of the liquid, and the plane of the rectangle being inclined at an angle θ to the vertical.

3. Find the conditions of equilibrium of a body freely floating in a liquid.

A solid cone has its axis of length h and is of density ρ ; if it floats in a liquid of density σ ($>\rho$), find how much of its axis is out of the fluid.

4. Find the centre of pressure of a rectangular lamina immersed in homogeneous liquid with one side in the surface, the plane of the lamina being inclined at an angle to the vertical.

Determine the specific gravity of a liquid with the aid of a Nicholson's hydrometer.

5. Define a perfect gas.

• Give an experimental verification of Boyle's law.

The radius of a sphere containing air is doubled, and the temperature raised from 0°C. to 91°C. Prove that the pressure of the air is reduced to one-sixth of its original value, the coefficient of expansion per $^{\circ}\text{C.}$ being $\frac{1}{273}$.

6. Explain the working of a force-pump in which a continuous stream may be obtained.

Explain the action of a hydrostatic machine which may be used for the purpose of pumping the air out of a vessel in which a vacuum is desired.

Group B.

7. Define—celestial meridian, prime vertical, celestial latitude, hour angle.

Explain Foucault's pendulum experiments to prove the earth's rotation.

8. Establish the law of refraction of a heavenly body, $x = k \tan z$, and find k when the latitude of the place of observation is known.

The apparent altitude of a star is 30° ; calculate the true altitude, the coefficient of refraction being $58''.2$.

9. Explain how the average amount of heat derived from the sun each day in summer is greater than in winter, and further, how the mean temperature is higher in August than in June, and lower in February than in December.

Find the duration of twilight at the Equator during the equinoxes.

Find the latitude of the place for which twilight just lasts all night when the sun's declination is 16°N.

10. State Kepler's laws.

Deduce Kepler's third law from the law of gravitation.

The periodic time of Mercury being 88 days, find the interval between two successive inferior conjunctions of this planet.

11. Explain the effect of aberration on the position of a star, and prove that aberration varies as the sine of the earth's way.

Prove that, owing to aberration, a star situated at the pole of the ecliptic will, in the course of a year, appear to revolve round its true position in a circle.

12. Prove that it is impossible for a lunar eclipse to occur if the distance between the centres of the moon and the earth's shadow exceeds $56'$, and that for a total eclipse the distance cannot exceed $26'$.

Find at what time a star whose right ascension is $19^{\text{h}} 43^{\text{m}} 51^{\text{s}}$ will cross the meridian of Greenwich, the right ascension of the mean sun at Greenwich mean noon being $0^{\text{h}} 6^{\text{m}} 40^{\text{s}}$.

BENGALI VERNACULAR

1. Attempt any **one** of the following questions :—

(a) What, according to the writer of “প্রাচীন কবি ও আধুনিক কবি”, are the characteristics of the Bengali conception of love, contrasted with the Western ?

(b) Explain with reference to the context Bankim Chandra's remark “ঈশ্বর গুপ্তের অলীলতা প্রকৃত অলীলতা নহে।”

(c) Discuss Bankim Chandra's view that the ills to which Ishwar Gupta was subjected in life by Providence had a distinct effect on his humour and poetry.

2. Explain **one** of the following passages, adding notes where necessary :—

(a) রাগে সর্বদা জলিয়া যায় যে এখন আমরা সকলে মোচা ভুলিয়া “কেলাকা ফুল” বলিতে শিখিয়াছি।

(b) বাঙ্গালার অবস্থা আবার অবনতির পথে ফিরিয়া না গেলে খাঁটি বাঙ্গালী কবি আর জন্মিতে পারে না। দেশভক্ত জোন্স, গমিসের তৃতীয় সংস্করণ হইলে চলিবে না।

3. Explain any **one** of the following :—

(a) মুদিল সন্ন্যাসে আঁখি বিরসবদনা

নলিনী।

(b) স্নগন্ধবহু বহিল চৌদিকে

স্বস্বনে সবার কাছে কহিয়া বিলাসী

কোন্ কোন্ ফুল চুখি কি ধন পাইলা।

(c) চিত্রলেখা স্নকেশিনী মিশ্রকেশী আসি

নাচিলে শিজিতে রঞ্জি দেবকুলমণঃ।

4. Write the substance of গান্ধারীর আবেদন।

5. Write short notes on :—পুণ্ডরীকাক্ষ বক্ষো নিবাসিনী ; ক্লান্ত বিশ্বধর শেষ ; অনন্তর পথে।

6. **Either**, Discuss the remark that Bankim has tried to typify the virtues inculcated by the Gita in his conception of প্রফুল্ল।

Or, Explain one of the following passages with reference to the context :—

(a) “আমি নূতন নহি, আমি পুরাতন, আমি সেই বাক্য মাত্র। কতবার আসিয়াছি, তোমরা আমাকে ভুলিয়া গিয়াছ, তাই আবার আসিলাম।”

(b) “আমাদের দেশে যে কোন নূতন জিনিষ আবির্ভূত হইয়াছে, আমরা তাহাকে ধীরে ধীরে পুরাতনের সহিত মিশাইয়া আপন করিয়া লইয়াছি।”

7. What, according to Sir Asutosh, is the good derived from our literary conferences convened annually ?

8. Expand the sense contained in—

“বোলতা কহিল এসে ক্ষুদ্র মউচাক
এ রি তরে মধুকর এত কর জাঁক ।
মধুকর কহে তারে তুমি এস ভাই
আরো ক্ষুদ্র মউচাক রচ দেখি তাই ।”

9. Correct all errors in the following :—

তাহার যখন বয়স্কর পনের বৎসর তখন তাহার একটি ভাই জন্মে । সেই
সমুজাত শিশুর বাঁচিবার আশা ছিল না, এজন্য তাহার মাতা অত্যন্ত মনকষ্টে
থাকিতেন, তোমাদের ব্যবহার অত্যন্ত লজ্জাকর, আমি তোমার অনেক দোষ
ক্ষমা করিয়াছি, কিন্তু এখন তাহার এত আতিশয্যতা হইয়াছে, যে আমি সহ্য
করিতে পারি না । সংসারের শাস্তি রক্ষা করিতে হইলে ঐক্যতা রক্ষার
দরকার । অত্র পত্র বাড়ীর ঠিকানায় পাঠাইলাম ।

10. Give **two** instances of the degradation of meaning of Sanskrit words in Bengali.11. Translate **one** of the following passages into correct and elegant Bengali :—

(a) Not only in Jaipur state but throughout India affairs in Sikar create anxiety. With good fortune bloodshed may be avoided but the profounder causes which gave rise to the tragic events of July 5 and the disturbances of the preceding eleven weeks seem as far from removal as ever. It is difficult for ordinary folk outside Jaipur territory to judge the rights and wrongs of the dispute. But the feeling is growing that disorder and uncertainty have lasted long enough and that unless the situation shows rapid improvement fresh means of effecting a settlement may be imperative.

(b) It is common to say of Benares that it is curiously modern, and there is on the face of it a certain truth in the statement. For the palaces, monasteries, and temples that line the banks of the Ganges between the mouths of Baruna and Asi have been built for the most part within the last three hundred years. But never did any city so sing the song of the past. Truly the city, even as she stands, is more ancient than any superficial critic would suppose. It was here at Sarnath that the great message pealed out whose echoes have never died away in history. 'Open ye your ears, O Monks, the deliverance from death is found !'

12. Write an essay in Bengali on any **one** of the following :—

(a) Imperialism.

(b) The need of a universal language for India and the claims of Hindi and English to be adopted as such.

(c) Provincial government under the new Constitution and how they are working.

ECONOMICS—PASS

FIRST PAPER

Answer any six questions.

1. What is the subject-matter of economics ? How is economics related to politics, ethics, and sociology ?
2. Discuss the various elements that affect the efficiency of workmen.
3. Show, from your personal observation or experience, how manufacturers, merchants, bankers, and speculators co-operate in the organization of production.
4. What do you understand by the value of money ? How is the value of money determined ?

5. Mention some instruments of credit. Show how they economize the use of gold.
6. Explain how price is determined in a market under perfect competition.
7. Explain the origin and significance of rent.
8. What are the different elements that constitute the profit of an entrepreneur's business?
9. What are the different forms of public debt? Suggest measures by which the burden of public debt may be diminished.
10. Discuss the effect of changes in the rate of discount on general prices.

SECOND PAPER

Answer any six questions.

1. Examine the relation between legislation and public opinion.
2. What are the characteristics of a non-sovereign law-making body? Illustrate your answer.
3. What is meant by the term 'liberty'? How far is it true to say that law is the condition of liberty?
4. Is the party-system essential to modern democracy? What are the merits and demerits of the party-system?
5. What are the conditions essential to the success of a federal union? How far do they exist in India?
6. Explain and illustrate, with reference to the conditions in England, what are meant by the law of the Constitution and the conventions of the Constitution.
7. Explain the difference between the Ministry and the Cabinet in England. What is meant by the principle of ministerial responsibility there?
8. Discuss the position and powers of the President of the U.S.A. in relation both to Congress and to his Cabinet.
9. Describe the nature and extent of the powers of the Governor of a Province in regard to legislation under the present Constitution of India.
10. Discuss the constitution and functions of the Federal Executive as provided for by the Government of India Act, 1935.

THIRD PAPER

Answer any six questions.

1. Discuss the arguments for and against the permanent settlement of land-revenue in Bengal.

2. Examine the main defects of Indian industrial labour and suggest measures for improving its efficiency.
3. Examine the causes and possible remedies of the subdivision and fragmentation of agricultural holdings in India.
4. Describe the objects of the Co-operative Credit Societies in India. How far have these objects been realized in Bengal?
5. Discuss the economic effects of the employment of foreign capital in India.
6. Examine the present position of the jute-manufacturing industry in India.
7. Describe the changes which took place in the currency system of India during 1893-1900.
8. Write short notes on :—(a) Gold Standard Reserve, (b) the salt tax, (c) State *versus* Company management of railways in India.
9. Describe the chief features of India's foreign trade.
10. Examine the division of financial resources between the Central Government and the Provinces under the present Constitution of India.

HISTORY—PASS

FIRST PAPER.

Only six questions are to be answered.

1. Discuss critically any one of the following :—
 - (a) 'Many readers will be surprised to learn of the existence at such an early date of a government as that of the Mauryas, which anticipated in many respects the institutions of modern times.'
 - (b) 'Whatever exertions I make are for the end that I may discharge my debt to animate beings and that while I make some happy here, they may in the next world gain heaven.'
2. Give a short account of the achievements of Kaniska.
3. Sketch briefly the history of the Sakas in India.
4. Give a short account of the reign of Rajendra Choladeva I and describe the administrative system of the Cholas.
5. Write critical notes on any two of the following :—
 - (a) downfall of the Maurya empire; (b) the Satraps of Ujjain

(c) Hun invasions of India ; (d) the art of Gandhara ; (e) the account of Fa-hien ; (f) the University of Nalanda.

6. Sketch the life of Sultan Mahmud of Ghazni and attempt an estimate of his achievements.

7. Discuss the causes of the downfall of the Turco-Afghan empire in India.

8. Compare the achievements and ideals of Sher Shah and Akbar.

9. Narrate the history of the rise of the Marathas and discuss the part played by Sivaji in Indian History.

10. Describe briefly Aurangzeb as a ruler and conqueror and account for his failure.

11. Discuss either of the following passages :—

(a) 'Ranjit Singh is one of the great personalities of Indian history.'

(b) 'Lord William Bentinck ruled India with prudence, integrity, and benevolence and never forgot that the end of Government is the welfare of the governed.'

12. Give a short account of the struggle between the Marathas and the rising British power in the eighteenth century.

13. Discuss the growth of self-government in British India.

14. Write critical notes on any two of the following :—

(a) the impeachment of Warren Hastings ; (b) Nana Farnavis ; (c) the Gwalior War ; (d) the foreign policy of Lord Curzon ; (e) the Subsidiary Alliance ; (f) the Doctrine of Lapse ; (g) the Queen's Proclamation.

HISTORY—PASS

SECOND PAPER

Modern Europe

Candidates will answer six questions only.

1. Give an account of the foreign and the domestic policy of Mazarin.

2. What is your estimate of the contributions made by Frederick the Great to the forward march of Prussia ?

3. Give an account of Russia at the accession of Peter the Great with reference to her (a) geographical position, (b) social condition, (c) political condition. Enumerate the various steps taken by Peter to make Russia a first class European power.

4. Account for the collapse of the maritime ascendancy of Holland.
5. Discuss the influence of (a) Montesquieu, (b) the Economists, (c) Voltaire, (d) Rousseau on the French Revolution.
6. Assess the importance of the work of the 'constituent Assembly' in France.
7. What is your estimate of the part played by the 'Bourgeois' in the French Revolution?
8. Describe Napoleon as a reformer.
9. 'It is said that at Tilsit, Napoleon reached the height of his power' (RIKER). Do you agree?
10. Give an account of the territorial adjustments at the Congress of Vienna, 1815. How far were they directed against France?
11. Write notes on any four of the following :—(a) Maria Theresa; (b) Danton; (c) the Battle of Trafalgar; (d) the causes of the War of the Spanish Succession; (e) Colbert.
12. Discuss the main causes of the Industrial Revolution. What were its effects?

HISTORY—PASS

THIRD PAPER

Not more than six questions to be attempted.

1. Explain the aims and ideals of the Holy Alliance and account for its failure.
2. Review the career of Mehmet Ali with special reference to the Eastern Question.
3. Explain how the Austrian Empire survived the revolution of 1848.
4. Briefly write the history of Italian unity. •
5. What led to the Austro-Prussian duel of 1866? Was the conflict really unavoidable?
6. 'Out of Disraeli's policy at the Congress of Berlin arose most of the causes of the Balkan Wars of 1912 and 1913 and of the Great War of 1914.' Explain.
7. Critically discuss the European settlement of 1919.
8. Briefly trace the expansion of the British Empire in Africa during the nineteenth century.

9. Write a short history of the Boxer War, its causes and consequences.

10. Give a brief account of the Russo-Japanese War. How did it affect the political situation in the Far East?

11. Give an estimate of Abraham Lincoln as a man and as a statesman.

12. Write notes on any four of the following :—the July Revolution ; the Carlsbad decrees ; the Agadir incident ; the Ems telegram ; the Fashoda incident ; the Tientsin Treaties ; the Kultur-Kampf.

PHILOSOPHY—PASS.

FIRST PAPER

Answer any five questions.

1. What is the relation of psychology to practical life? Do you think that you have profited by the study of psychology? If so, in what ways?

2. Explain the influences of environment and heredity on mental growth. How do you account for the distinction between an idiot and a genius?

3. Give a general idea of the parts and functions of the nervous system. How is it proved that each particular brain-centre performs a special function?

4. Distinguish, with examples, learnt activity from un-learnt activity. Does man learn in the same way as lower animals?

5. Define perception. How does perception depend on attention, reproduction, and interpretation of meaning? Explain with an example.

6. Explain, with examples, the conditions of attention. Is it possible to attend to more than one thing at a time? How would you explain either Julius Caesar's ability to dictate at once different letters to several copyists, or Mr. Somesh Bose's ability to perform different sums simultaneously?

7. What is a good memory? How can it be acquired? How would you explain a student's good memory for Logic but a bad one for History?

8. Distinguish between emotion and sentiment. Has emotion any connexion with bodily states? What is the use of emotion for life?

SECOND PAPER

Answer any five questions.

1. Is it true to say that the method of ethics is philosophical rather than scientific?
2. What is the object of moral judgement? Illustrate your answer by the analysis of a typical voluntary action.
3. Define hedonism, and show the difficulties, if there be any, in passing from egoistic hedonism to altruistic hedonism.
4. Discuss the value of Kant's categorical imperative as a criterion of moral life.
5. Explain the concept of self-realization and show whether it is an advance on the hedonistic interpretation of the ethical end.
6. What is the exact relation between the individual and society?
7. Immortality is taken as one of the implications of moral life. What should immortality here mean? Explain fully.
8. Should capital punishment be abolished? Give reasons for your answer.

THIRD PAPER

Answer any five questions.

1. What is the function of philosophy as distinct from that of the sciences?
2. Discuss the theory of the origin of knowledge with special reference to the distinction between empiricism and rationalism.
3. Explain the principle of causality. Is causality always teleological?
4. 'The Soul-atom is nothing but the survival of a worn-out metaphysics.' Criticize this statement and give your own view about the nature of the Soul.
5. Explain the relation between matter and energy. What do you understand by the principle of conservation of energy?
6. Explain the theory of evolution. Is natural selection a mechanical or an intelligent process?
7. What is idealistic Pantheism? Estimate its value as the final explanation of the Universe.
8. What does Kant mean by saying that space and time are *a priori* forms of perception?

SANSKRIT—PASS

FIRST PAPER

1. Either, Clearly state the arguments put forth by Bhima in supporting the speech of Draupadi.

Or, What sort of a person, according to Manu, should be appointed a minister by a king? What, according to Manu, are the places where deliberations on state policies should be conducted? Who are the persons who should not be allowed by a king to remain in those places while the deliberations are being conducted?

2. Translate into English :—

(a) কুরু তন্নতিমেববিক্রমে, নৃপ! নিধুয় তমঃ প্রমাদজম্।

ঋষমেতদবেহি বিদ্বিষাং, তদনুত্‌সহিতা বিপত্তয়ঃ ॥

(b) ত্রৈবিদ্যোভাস্ত্রয়ীং বিদ্যাং দণ্ডনীতিঞ্চ শাস্ত্রতীম্।

আত্মীক্ষিকীং চাত্তবিদ্যাং বার্তারন্তাং চ লোকতঃ ॥

(c) অশক্তিদশায়াং ক্ষমতে, শক্তিং প্রাপ্যোন্নয়তি, এব মে কস্মিন্নপি দেশে কালে চ প্রয়োজনানুরোবিন শত্রুবা মিত্রো বা উদাসীনো বা ভবতি, ততো রাজবল্লভোহহমিতি বুদ্ধ্য। নাবজ্ঞেয়ঃ।

3. Give the meanings in Sanskrit of any four of the following :—

(a) কুপ্যম্। (b) জিহ্বা। (c) আয়তিঃ। (d) অধিক্ষেপঃ। (e)

আধরঃ। (f) প্রবৃত্তিসারঃ।

4. Explain either in English or in Sanskrit either the Group A or the Group B.

Group A

(i) পুরঃসরা ধামবতাং যশোধনাঃ স্তূহুঃসহং প্রাপ্য নিকারমীদৃশম্।

ভবাদৃশাশ্চেদধিকুর্কতে রতিং নিরাশ্রয়া হন্ত ! ইতা মনস্বিতা ॥

(ii) তদলং প্রতিপক্ষমুন্নতেরবলস্য ব্যবসায়বক্ষ্যাতাম্।

নিবসন্তি পরাক্রমাশ্রয়া ন বিবাদেন সমং সম্বন্ধয়ঃ ॥

- (iii) এবং বিজয়মানস্ত য়েহস্ত হ্যঃ পরিপস্থিনঃ ।
তানানয়েদ্বশং সৰ্বান্ সামাদিভিরূপক্রমৈঃ ॥ .

Group B

- (i) অসক্তমারাধয়তো যথায়থং বিভজ্য ভক্ত্যা সমপক্ষপাতয়া ।
গুণাহুগাগাদিব সখ্যমীযিবান্ন বাধতেহস্ত ত্রিগণঃ পরস্পরম্ ॥
- (ii) অহুপালয়তামুদেষ্যতীং প্রভৃশক্তিং দ্বিষতামনীহয়া ।
অপয়াস্ত্যচিরান্নহীভূজাং জননিবাদভয়াদিব শ্রিয়ঃ ॥
- (iii) তেয়ামর্থং নিযুক্তীত শূরান্ দক্ষান্ কুলোদ্গতান্ ।
শুচীনা করকর্মাশ্তে ভীকনস্তন্বিবেশনে ॥

Derive পুরঃসর and account for the আত্মনেপদম্ in অধিকুর্কতে in (i), Group A ; account for ল্যপ্ (যপ্) in অবলম্ব্য in (ii), Group A ; account for শানচ্ in বিজয়মানস্ত, and what are referred to by আদি in সামাদিভিঃ in (iii), Group A.

Derive ইয়িবান্ and give the second case-ending, plural form, of the base in it. What is ত্রিগণঃ in (i), Group B ? Account for the absence of হুম্ in উদেষ্যতীম্ ; expound the *samasas* in জননিবাদভয়াং and also account for its case-ending in (ii), Group B. Account for the আত্মনেপদম্ in নিযুক্তীত in (iii), Group B.

5. Set forth the idea contained in any three of the following :—

- (a) অরিষু হি বিজয়ার্থিনঃ ক্ষিতীশা বিদধতিসোপধি সন্ধিদুষণানি ।
(b) ব্রজন্তি শত্রুনবধুয় নিঃস্পৃহাংশয়েন সিদ্ধিং স্ননয়ে ন ভূতৃতঃ ।
(c) আত্মানং সততং রক্ষেদারৈরপি ধনৈরপি ।
(b) বিনীতাত্মা হি নৃপতিন বিনশতি কহিচিৎ ।

6. Comment grammatically on any three of the underlined words in the following :—

(a) কৃতমাবিকৃতপৌরুষৈবভুজৈঃ ।

(b) উপসাস্থয়িতুং মহীপতির্দ্বিরদং দৃষ্টমিবোপচক্রমে ।

(c) তত্ত্বাহাশু বিনাশায় রাজা প্রকুরুতে মনঃ ।

(d) ন চৈনং ভুবি শক্লোতি কশ্চিদপ্যভিবীক্ষিতুম্ ।

Translate any five into Sanskrit :—

(a) In the meanwhile. Sankhachuda came there, having worshipped Gokarna, and saw the rock of the execution sprinkled with many drops of blood, and then he thought, 'Alas ! the great-hearted one has offered himself for me.'

(b) Then the night departed and the keen-rayed sun arose and she went out of the hollow in the middle of the tree. Surely the gods themselves preserve, in misfortune, good women exclusively devoted to their husbands.

(c) Then she travelled along slowly in the dress of a man, and in the afternoon she saw a good cowherd who was moved to compassion, seeing her delicate beauty. She approached him and said, 'What county is this ? Please tell me.'

(d) Then, returning from a long absence, after slaying his enemy, he delighted his mother, who was eager to behold him, as Rama did Kausalya. The citizens welcomed him, and then he adorned the throne of his father.

(e) And while the peasants were digging the earth, a yaksha, in stature like a mountain, rose up from beneath it and said, 'O king ! this treasure which I have so long guarded, belongs to thee.'

(f) The battle having come to an end, the gods who were present in their chariots, having departed, after showering mandara flowers, a universal rejoicing took place over the whole world.

(g) Then the hermit Matanga, after meditating, said to her, 'Princess ! cease to despair, recover your composure ; do misfortunes ever consider whether their victim is tender or not ?'

SECOND PAPER

1. Either, Describe the scene of Sakuntala's departure for her husband's house with special reference to the part played by Kanva.

Or Who was Sanumati ? What was her mission ? What was her relation with Sakuntala ? Narrate her experiences about Dusyanta's condition after his recollection of Sakuntala.

Or, (a) Make an estimate of Rumanvan from various references. How is the difficulty of his task appreciated by Yaugandharayana ?

(b) Give in Sanskrit the substance of the messages of Mahasena and his queen to Udayana.

2. Translate into English either of the following groups of *slokas* :—

A

- (i) তীর্থোদকানি সমিধঃ কুসুমানি দর্ভান্
 শ্বেতং বনাতুপনয়ন্ত তপোধনানাম্ ।
 ধর্মপ্রিয়া নৃপসুতা ন হি ধর্মপীড়া
 মিচ্ছেত্তপস্বিষ্ কুলব্রতমেতদগ্ৰাঃ ॥
- (ii) সম্বন্ধিরাজ্যমিদমেতং মহান্ প্রহর্ষঃ
 স্বভা পুননৃপসুতানিধনং বিষাদঃ ।
 কিং নাম দৈব ভবতা ন কৃতং যদি শ্রাদ্
 রাজ্যং পরৈরপহৃতং কুশলং চ দেব্যাঃ ॥
- (iii) সায়ন্তনে সবনকর্মণি সংপ্রবৃন্তে
 বেদীং ছত্ৰাশনবতীং পরিতঃ প্রয়ন্তাঃ ।
 ছাত্রাশ্রয়স্তি বহুধা ভয়মাদধানাঃ
 সঙ্ক্যাপয়োদকপিপাসাঃ পিশিতাশনানাম্ ॥

B

- (i) বাচং ন মিশ্রয়তি যতপি মদ্বচোভিঃ
 কর্ণং দদাত্যবহিতা ময়ি ভাষমাণে ।
 কামং ন তিষ্ঠতি মদাননসংমুখীনা
 ভূয়িষ্ঠমন্তবিষয়া ন তু দৃষ্টিরগ্ৰাঃ ॥

(ii) স্বমর্হতাং প্রাগ্রসরঃ স্বতোহসি নঃ
শকুন্তলা মৃত্তিমতী চ সতক্রিয়া ।

সমানয়ংস্তল্যগুণং বধুবরং
চিরস্ত বাচ্যং ন গতঃ প্রজ্ঞাপতিঃ ॥

(iii) ঋজায়তাং চ বিরলাং চ নতোন্নতাং চ
সপ্তর্ষিবংশকুটিলাং চ নিবর্তনেষু ।

নির্মুচ্যমান ভুজগোদরনির্মলস্ত
সীমামিবাস্বরতলস্ত বিভজ্যমানাম্ ॥

3. (a) What other *vibhakti* can the word নৃপহস্তানিধন in A (ii) take ? Quote *sutra*.

(b) Derive ভূয়িষ্ঠ in B (i) and মৃত্তি in B (ii).

(c) Comment on the *samasa* in ধর্মপ্রিয়া in A (i) and সপ্তর্ষি in B (iii).

(d) Parse বেদীং in A (iii) and চিরস্ত in B (ii).

4. Write explanatory notes on any three of the following :—

(a) প্রত্যর্পিতশ্রাস ইবাস্তরাশ্রা ।

(b) ভাবস্থিরাণি জননাস্তরসৌহৃদানি ।

(c) ষষ্ঠীংশবৃত্তেরপি ধর্ম এষঃ ।

(d) গর্তঃ পিছং রিকথমর্হতি ।

(e) দ্বন্দ্বং দক্ষমরীচিসম্ভবমিদং তৎশ্রষ্টুরেকান্তরম্ ।

5. Expand the idea contained in any three of the following :—

(a) কালক্রমেণ জগতঃ পরিবর্তমানা

চক্রারপঃকিরিত গচ্ছতি ভাগ্যপংক্তিঃ ।

(b) আঅম গ্ৰহাণাণি স্থলহপয্যবখাণাণি মহাপুরুষহিঅ-আণি
হোন্তি ।

(c) অথায়ং বিভ্রমো বা স্মাদ্ বিভ্রমো হস্ত মে চিরম্ ।

(d) সাক্ষিমান্ ত্বাসো নির্ধাতয়িতব্যঃ ।

(e) যৌগন্ধরায়ণো ভবান্ নহু ।

6. Render into Sanskrit any four of the following extracts :—

(a) ভো কো গাম এদং জাণাদি—তাদিসে বয়ং অণথসলিলাবন্তে
পকিখন্তা উণ উম্মজ্জিস্মামো ত্তি ।

(b) তন্ত্ৰহোদী পত্ন্যাবদী তরুণী দস্মণীআ অকোবণা অণহঙ্কারা
মহরবাআ সদকিখংঞংঞা ।

(c) অস্মথং পত্ন্যাবদিং কেবলং দীবসহাঅং করিঅ পরিত্তজ্জদি ।
ইঅং পত্ন্যাবদী ঔহন্তা ।

(d) ভো বঅস্ম জং বেদসো থুজ্জলীলং বিত্তম্বেদি তং কিং অন্তণো
পহাবেণ ণং গম্বেবেঅস্ম ।

(e) বচ্ছ সঙ্গরব অণুগচ্ছদি ঈঅং ণো করুণপরিদেবিণী সউন্দলা ।
পচ্ছাদেসপরুসে ভত্তুণি কিং বা মে পুত্তিআ করেহু ।

(f) জাব দেবীএ বিত্তবলগ্গং উত্তরীঅং তরলিআ মোচেদি তাব মএ
ণিক্বাহিদো অত্তা ।

7. Turn into prose order one of the following *śloka*s and express
the meaning thereof in simple Sanskrit sentences of your own :—

(a) অধ্যাক্রান্তা বসতিরমুনাপ্যাশ্রমে সর্বভোগে
রক্ষাযোগাদয়মপি তপঃ প্রত্যহং সংচিনোতি ।

অস্ত্রাপি ত্বাং স্পৃশতি বশিনশ্চারণদ্বন্দ্বীভঃ
পুণ্যঃ শঙ্কো মূনিরিত্তি মুহঃ কেবলং রাজপূর্বঃ ।

(b) কিং ভাবধ্বুতিনামুপোদতপসাং বিবৈন্তপো দ্বিভং
ধর্মারণ্যচরেষু কেনচিহুত প্রাণিষসচেষ্টিতম্ ।

আহোশ্বিং প্রসবো মমাপচরিতৈবিত্তিত্তিতো বীকধা
মিত্যারুদবহপ্রতর্কমপরিচ্ছেদাকুলং মে মনঃ ॥

(c) সিধ্যস্তি কর্মস্ব মহংস্বপি যন্নিগ্নোজ্যোঃ
সন্তাবনাগুণমবেহি তমীশ্বরানাম্ ।

কিং বাভবিষ্যদরুণ স্তমসাং বিভেত্তা
তং চেং সহস্রকিরণে ধুরি নাকরিপাত ॥

Change the voice of the second line of (a). Account for the *vibhakti* in অসং in (b).

8. Translate into Sanskrit any five of the following :—

(a) One day he was wandering through the forest with some comrades ; he stopped to pluck a wild flower and lost sight of his friends.

(b) The king could not fulfil his promise of protecting the oppressed ; his efforts were frustrated by the mean-minded ministers.

(c) Between a son's son and the son of a daughter there exists no difference ; for the son of a daughter also can save a man in the next word.

(d) India was, in ancient times, famous for her precious things ; various kinds of precious stones are still found in abundance in different parts of the country.

(e) Vamadeva, who well knew right and wrong, being tormented by hunger desired to eat the flesh of a dog in order to save his life.

(f) The sage thereupon sprinkled a few drops of water in his face and then something very strange happened—the boy stood motionless and silent.

(g) He lost all desire for food and for sleep, and night and day he lay upon the grass gazing at his own image reflected in the water.

THIRD PAPER

1. Translate into English any *two* of the following passages :—

(a) পত্ৰলেখে, স্বয়াহপি যাস্ত্যাহধ্বনি ন মদ্বিরহপীড়া ভাবনীয়া । ন শরীর-সংস্কারেহনাদরঃ করনীয়ঃ । নাহারবেলাহতিক্রমণীয়া । ন যেন কেনচিদ্ অজ্ঞাতেন পথা যাতব্যম্ । ন যত্র তত্রৈব অনিরূপ্য অবস্থাতব্যমুচিতব্যং বা । ন যস্ত কস্তচিদ্ অপরিজ্ঞায়মানশ্রান্তরং দাতব্যম্ । সৰ্বদা শরীরেহপ্রমাদিগ্ৰা ভাব্যম্ । কিং করোমি ? স্বভোহপি মে বল্লভতরা দেবীপ্রাণাঃ, যেনৈবং মেকাকিনী তেষাং সন্ধারণায় বিসর্জিতাহসি । অপি চ মম জীবিতমপি তবৈব হন্তে বৰ্জতে । তন্নিয়তং স্বয়া আত্মা যত্নেন পরিরক্ষণীয়ঃ ।

(b) এতৎ খলু প্রদীপেনাগ্নেঃ প্রকাশনঃ.....ব্যজনানিলৈরতিবৰ্দ্ধনঃ প্রভঞ্জনশ্চ, যদশ্বদ্বিধৈঃ পরিবোধনমার্ধ্যশ্চ । তথাপি প্রাজ্ঞ্যাপি বহুশ্রুতশ্চাপি বিবেকিনোহপি বীরশ্চাপি সত্ত্ববতোহপি অবশং দুঃখাতিপাতেন বিশুদ্ধমপি বৰ্ষসলিলেন সর ইব মানসং কলুষীক্ৰিয়তে । কলুষীকৃত্যে মানসে কিমিদমিতি সৰ্বমেব দৰ্শনং নশ্চতি । ন-চিন্তমালোচয়তি, ন বুদ্ধিবুধ্যতে । ন বিবেকোহপি বিবিনক্তি-যেনৈবং ব্রবীমি ।

(c) আসীং পুরা বারণাবতী নাম নগরী সম্পদা অমরাবতীমপি অতিশয়ানা । রাজাহপি স্বভূজবিক্রমনির্জিতাখিলারাতিঃ পুরুষোত্তমো নাম জ্ঞায়েন প্রজাঃ পালয়ামাস । অশ্র রাজ্ঞো দ্বাবমাতৌ কার্ত্তবীৰ্য্য-মহাবিক্রান্তৌ নাম ভূজবলাক্রান্তবহুধাতলাবপি পরম্পরং কলি পরায়ণৌ আস্তাম্ । কলহশ্চ পরাং ভূমিং গতাত্যাং তাভ্যাং সংলাপোহপি পরিত্যক্তঃ । "অন্ততশ্চ কলহো-হয়মীদৃশীং দশমাগম্য—যদস্যাং নগৰ্ধ্যাং কার্ত্তবীৰ্য্যপক্ষপাতিনঃ কেচন, মহাবিক্রান্ত পক্ষপাতিনশ্চ কতিপয়ে—ইতি ভেদঃ সৰ্বতঃ প্রসূতঃ ।

2. (a) Account for the case-ending in any *three* of the words underlined :—

(i) বিধিদেবান্ বেদানধ্যাপয়ামাস ।

- (ii) দেবদত্তং শতমদগুয়দ্ রাজা ।
 (iii) অজ্ঞা গ্রামং নীয়নে ।
 (iv) অধ্যয়নাং পরাজয়তে জড়ঃ ।
 (v) দক্ষিণেন বৃক্ষবাটিকামালাপ ইব শ্ৰয়তে ।

(b) Name and expound the *samus* as in any three of the following, noting peculiarities :—

- (i) গেহেন্দী ; (ii) দ্বিত্রাঃ ; (iii) মহাবাজঃ ; (iv) পার্বেগকম্
 (v) ব্রহ্মবচসম্ ।

(c) Substitute **one word** for any **two** of the following underlined expressions :—

- (i) স্বমিত্রায়া অপত্যং পুমান্ ।
 (ii) হাতুমিচ্ছাতি ।
 (iii) নৃপমিব আচরতি, রাজপুংসং গ্রামীণঃ ।

(d) Derive any **four** of the following :—ফলেগ্রহি ; অক্ষুদ্ভদ ; পণ্ডিতমানি ; অমৃধ্যম্পশ্চা ; বৈয়াকরণ ; পাথেষ ; দৌবারিক ।

(e) Conjugate any **five** of the following :—দ্বিষ্ in লট্ second person singular ; দহ্ in লট্ third person singular ; ভূজ্ (to protect) in লুঙ্ second person singular ; যুষ্ in লিট্ third person singular ; বৃধ্ in লুঙ্ third person dual ; পুষ্ in লঙ্ third person singular ; পিষ in লট্ third person singular ; কৃ in লিট্ second person singular.

(f) Decline any **six** of the following :—যুবন্ in locative singular ; অদন্ (masculine) in the nominative plural ; অহি in the instrumental singular ; কতম্ (neuter) in the nominative

singular ; क्लौष्टू in the nominative plural ; अर्बन् in the nominative dual ; त्रिर्वाच् in the instrumental singular ; अनडूह् in the accusative singular.

(g) Give the feminine form of any **two** of the following :—विद्वस् ; उभय ; गृहपति ; आचार्य (wife of a preceptor).

(h) Correct the error in any **four** of the following :—

- (i) ভোক্তুং প্রক্রমতি রাজা ।
- (ii) রাজা প্রজাভাঃ করমাদদাতি ।
- (iii) দুর্মেধাং তনয়ং প্রাপ্য গৃহস্থঃ পরিত্রিত্তে ।
- (iv) চন্দ্রগুপ্তসভং দৃষ্ট্বা বিস্মিতোহভূত্ স যবনঃ ।
- (v) বাহুনোভ্যামীশ্বরমুপাসীং ।

3. Either, Give a summary of the teachings of the *Bhagavadgita*.

Or, State and examine the grounds on which some parts of the *Ramayana* have been held to be spurious.

4. Either, Write a short notes on the age and history of the *Mahabharata*.

Or, Give a survey of the development of Mahakavya from the time of Asvaghosa down to that of Sriharsa.

5. Write notes on any **five** of the following :—Rajatarangini, Brhatkathaslokasangraha, Kavyadarsa, Kautilya, Halayudha, Vasavadatta, Kumaradasa, Vikramankadevacarita, Canakya Yaska, Harsacarita.

B. A. ENGLISH PASS—First Paper

1. *Either*, Discuss the character of Touchstone. (Consider in this connexion the remark—Touchstone is ‘a mixture of the ancient philosopher with the modern buffoon’.)

Or, Comment on the remark—‘The play (*As You Like It*) is in form a Comedy of Dialogue rather than a Comedy of Incident.’

2. *Either*, Sketch the character of Desdemona. (Consider in this connexion the lines—‘A maiden *never bold* ; Of spirit so still and quiet, that her motion Blush’d at herself’.)

Or, Point out the main deviations from Cinthio in *Othello*, and indicate their bearing on the artistic excellence of the play.

3. *Either*, Describe the character of Orlando. (Consider in this connexion the remark—‘When his luck turns, we begin to feel his deficiencies.....the lover in luck fails to hold our interest’.)

Or, Give an analysis of the last scene in *Othello* (v. 2), and indicate the nature of the conflict in Othello’s mind.

4. *Either*, Indicate from the poems of Wordsworth that you have read, his ideas regarding the influence of Nature on human mind. Give illustrative references.

Or, Give an analysis of Shelley’s *To a Skylark*, and add a critical note on the poem.

5. Explain any *four* of the following passages, taking at least *one* passage from *each* group :—

Group A

- (a) Thou art not for the fashion of these times,
Where none will sweat but for promotion,
And having that, do choke their service up
Even with the having : ’tis not so with thee. •
But, poor old man, thou prunest a rotten tree,
That cannot so much as a blossom yield
In lieu of all thy pains and husbandry.
- (b) Or what is he of basest function,
That says his bravery is not on my cost,
Thinking that I mean him, but therein suits •
His folly to the mettle of my speech ?
.....if it do him right,

Then he hath wrong'd himself ; if he be free ,
 Why then my taxing like a wild-goose flies,
 Unclaim'd of any man.

Group B

- (c) Be assured of this,
 That the magnifico is much beloved,
 And hath in his effect a voice potential
 As double as the duke's : he will divorce you ;
 Or put upon you what restraint and grievance
 The law, with all his might to enforce it on,
 Will give him cable.
- (d) Des. Be you well assured
 He shall in strangeness stand no further off
 Than in a politic distance.
- Cas. Ay, but, lady,
 That policy may either last so long,
 Or feed upon such nice and waterish diet,
 Or breed itself so out of circumstance,
 That, I being absent and my place supplied,
 My general will forget my love and service.

Group C

- (c) Thy soul was like a Star, and dwelt apart :
 Thou hadst a voice whose sound was like the sea,
 Pure as the naked heavens, majestic, free ;
 So didst thou travel on life's common way
 In cheerful godliness ; and yet thy heart
 The lowliest duties on herself did lay.
- (f) Quiet coves
 His soul has in its Autumn, when his wings
 He furlleth close ; contented so to look
 On mists in idleness—to let fair things
 Pass by unheeded as a threshold brook ;
 He has his Winter too of pale misfeature,
 Or else he would forgo his mortal nature.

ENGLISH PASS—Second Paper.

1. *Either*, Give a brief sketch of Garibaldi's life in exile.
 Or, Write a note on the character of Boldwood, indicating the tragic potentialities implicit in it.

2. *Either*, Indicate the importance of the Bible in the development of English prose.

Or, Write a short account of the trial and crucifixion of Christ.

3. *Either*, Point out the causes that led to the Tartar Revolt.

Or, Which of the two essays of De Quincey do you think more characteristic of the author, and why ?

4. *Either*, Write a short note on the Roman slave.

Or, What are the responsibilities of a biographer ?

5. Explain, with reference to the context, one passage from each of the following groups :—

Group A

(a) Notwithstanding the propensity of mankind to exalt the past and to depreciate the present, the tranquil and prosperous state of the empire was warmly felt and honestly confessed by the provincials as well as Romans.

Or, (b) That the question has ever been not only asked but seriously debated, whether History was an art, is certainly one of the curiosities of human ineptitude.

Group B

(c) Private and personal malignity is not unfrequently immortal, but rare indeed is it to find the same pertinacity of malice in a nation.

Or, (d) The sensibility of the horse, uttering itself in the maniac light of his eyes, might be the last vibration of such a movement ; the glory of Salamanca might be the first.

Group C

(e) Napoleon, as a good Frenchman, could no more tolerate a united Italy than a united Germany—though by the irony of fate he was destined to be instrumental in the creation of both.

Or, (f) Such is the selfishness of some charming woman. Perhaps it was some excuse for thus torturing honesty to her own advantage, that she had absolutely no other sound judgment within easy reach.

Group D

(g) This is that bread which came down from heaven : not as your fathers did eat manna, and are dead : he that eateth of this bread shall live for ever.

Or, (h) For to him that is joined to all the living there is hope : for a living dog is better than a dead lion.

Or, (i) But whosoever drinketh of the water that I shall give him shall never thirst ; but the water that I shall give him shall be in him a well of water springing up into everlasting life.

ENGLISH PASS—Third Paper

1. Write an essay on *one* of the following subjects :—

- (a) Commerce as a profession.
- (b) The essentials of tragedy.
- (c) The virtue of openmindedness.
- (d) The relation of art to morality.

2. Give in your own words the substance of *one* of the following passages :—

(a) What is that constitutes the look of a gentleman is more easily felt than described. We all know it when we see it ; but we do not know how to account for it, or to explain in what it consists. Ease, grace, dignity have been given as the exponents and expressive symbols of this look ; but I would rather say that an habitual self-possession determines the appearance of a gentleman. He should have the complete command, not only over his countenance, but over his limbs and motions. In other words, he should discover in his air and manner a voluntary power over his whole body, which with every inflection of it, should be under the control of his will. It must be evident that he looks and does as he likes, without any restraint, confusion, or awkwardness. He is, in fact, master of his person, as the professor of any art or science is of a particular instrument ; he directs it to what use he pleases and intends. Wherever this power and facility appear, we recognize the look and deportment of the gentleman,—that is, of a person who by his habits and situation in life, and in his ordinary intercourse with society, has had little else to do than to study those movements, and that carriage of the body, which were accompanied with most satisfaction to himself, and were calculated to excite the approbation of the beholder. Ease, it might be observed, is not enough ; dignity is too much. There must be a certain *retenue*, a conscious decorum, added to the first,—and a certain ‘familiarity of regard, quenching the austere countenance of control’, in the other, to answer to our conception of this character. Perhaps propriety is as near a word as any to denote the manners of the gentleman ; elegance is necessary to the fine gentleman ; dignity is proper to noblemen ; and majesty to kings !

(b) The personal influence of the teacher is able in some sort

to dispense with an academical system, but that the system cannot in any sort dispense with personal influence. With influence there is life, without it there is none. An academical system without the personal influence of teachers upon pupils, is an arctic winter; it will create an ice-bound, petrified, cast-iron university, and nothing else. You will not call this any new notion of mine; and you will not suspect, after what happened to me a long twenty-five years ago, that I can never be induced to think otherwise. No! I have known a time in a Great School of Letters, where things went on for the most part by mere routine, and form took the place of earnestness. I have experienced a state of things, in which teachers were cut off from the taught as by an insurmountable barrier; when neither party entered into the thoughts of the other; when each lived by and in itself. This was the reign of law without influence, system without personality.

3. Develop the ideas contained in *one* of the following:—

(a) *A Comparison.*

The lapse of time and rivers is the same,
Both speed their journey with restless stream;
The silent pace with which they steal away
No wealth can bribe, no prayers persuade to stay;
Alike irrevocable both when past;
And a wide ocean swallows both at last.
Though each resemble each in every part,
A difference strikes at length the musing heart;
Streams never flow in vain; where streams abound
How laughs the land with various plenty crowned!
But since, that should enrich the nobler mind,
Neglected, leaves a dreary waste behind.

Or,

(b) *A Superscription.*

Look in my face; my name is Might-have-been;
I am also called No-more, Too-late, Farewell;
Unto thine ear I hold the dead sea shell,
Cast up thy Life's foam-fretted feet between;
Unto thine eyes the glass where that is seen
Which had Life's form and Love's, but by my spell
Is now a shaken shadow intolerable,
Of ultimate things unuttered the frail Screen.

Mark me, how still I am! But should there dart
One moment through thy Soul the soft surprise
Of that winged Peace which lulls the breath of
sighs,—

Then shalt thou see me smile, and turn apart
Thy visage to mine ambush at thy heart
Sleepless with cold commemorative eyes.

SANSKRIT—PASS—First Paper

1. *Either*, Summarize the speech of Indra, disguised as an old ascetic, to Arjuna, while he was practising penance in the Indrakila mountain.

Or, What according to Manu, are the functions of a दूत? What sort of a person should be appointed as a दूत? What are the weapons which must not be used by a king while fighting with his enemies? Who are the persons who should not be killed by a king in the battlefield?

2. Translate into English :—

(a) अविज्ञातप्रवक्ष्यन् वचो वाचस्पतेरपि ।

ब्रह्मत्यक्तलतामेव नयद्ब्रह्म इवेहितम् ।

(b) स किंस्वा साधु न शान्तिं बोधिधिपः

हितान्न यः संस्पृशते स किं प्रभुः ।

सदाशुक्लेषु हि कुर्वते रतिं

मुपेक्षमात्रेण च सर्वसंपदः ।

(c) यथाज्ञानमदभ्यासं वार्थ्याकव्यसङ्घट्टनाः ।

तथान्नाज्ञां ग्रहीतव्यां राष्ट्रिजाज्जिह्वः करः ।

Comment grammatically on किंस्वा and account for आश्चर्येण in संस्पृशते in (b).

3. Give in Sanskrit the meanings of any four of the following .—

विश्वरूप, भारतीय, अपवादः, अमर्षः, अदेवमातृका, प्रतीकतः ।

4. Explain *either* the Group A or the Group B. (One of the extracts must be explained in Sanskrit.)

Group A

- (i) অমুকঃ পর্য্যবস্বাতা জগ্নিনঃ সংভতা পমঃ !
ইতি ত্যাজ্যে ভবে ভব্যো মূল্যবুত্তিতে জনঃ ।
- (ii) প্রলীনভূপালমপি হিরায়তি প্রশাসদাবারিধিমণ্ডলং ভুবঃ ।
স চিস্তয়তোব ভিন্নমুদেয়তীরহো দুরন্তা বলবদ্বিরোধিতা ।
- (iii) যজ্ঞেত রাজা কৃতুভিবিবিধৈরাপ্তদক্ষিণৈঃ ।
ধর্ম্মার্থকৈব বিপ্রোভ্যো দত্তান্তোগান্ ধনানি চ ।

Group B

- (i) পুরাধিরূঢ়ঃ শয়নং মহাধনং বিবোধাসে যঃ স্তুতিগীতি মঙ্গলৈঃ ।
অদভ্রদর্ভামধিশয়া স স্থলীং জহাসি নিজামশিবৈঃ শিবাকরতৈঃ ।
- (ii) যঃ করোতি বধোদর্কা নিঃশ্রেয়সকরীঃ ক্রিমাঃ ।
গ্লানিদোষচ্ছিন্নঃ স্বচ্ছাঃ স মূঢ় পঙ্কজ-গ্রপঃ ।
- (iii) এবং বিজয়মানস্ত বেহস্ত স্যুঃ পরিপস্থিনঃ ।
তানানয়েষশং সর্বান্ সামাদিভিন্নপত্রমৈঃ ।

Account for অস্বানেপদম্ in উত্তীর্ণতে in (i), Group A. Account for the absence of যুজ্ in প্রশাসং; name and expound the *samasa* in আবারিধি in (ii), Group A. Account for the case-ending in কৃতুভিঃ in (iii), Group A. Derive অধিরূঢ় and শয়ন; account for জা in মহাধনং and the second case-ending in স্থলীং; give the লোপ্ত second person singular of the root in জহাসি in (i), Group B. Account for শানচ্ in বিজয়মানস্ত in (iii) Group B.

5. Put forth the idea contained in any three of the following :—

- (a) ব্রজন্তি শক্রং নবধ্বজং নিঃস্পৃহাঃ শমনে সিদ্ধিঃ মুনয়ো ন ভূভূতঃ ।
- (b) মহোদয়েভ্যস্তস্ত হিতামুবন্ধিভিঃ প্রতীক্যতে ধাতুরিবেহিতং কলৈঃ ।
- (c) নাম বস্তাভিনন্দন্তি দ্বিবোহপি স পূমান্ পূমান্ ।
- (d) ন জহাসি মহোজঙ্ঘং মানপ্রাণমলজ্বাতা ।
- (e) তীক্ষ্ণশ্চৈব মৃদুশ্চৈব রাজা ভবতি সম্যতঃ ।

6. Give the substance *either of (a) or (b) :—*

- (a) ধার্ত্তরাত্ৰিঃ সহ প্রীতির্ধৈরমস্মাৎস্বহৃদত ।
অসম্মৈত্রীহি দোষায় কুলচক্ষায়েব সেবিতা ।

(b) অবক্ষাকোপান্ত বিহস্তরাপদাং ভবন্তি বস্তাঃ স্বয়মেব দেহিনঃ ।

অমৰ্শপুংস্তেন জনস্ত জন্তনা ন জাতহাৰ্ণে ন বিৰিবাদরঃ ।

7. Translate into Sanskrit any five of the following ;—

(a) The king again saw that he was followed by a large body of ruffians, and being determined to escape from them, sent all the people in different directions.

(b) At length in the midst of the forest they met with three men who looked like thieves or ruffians. They were well armed, and one of them bore a sheep on his back.

(c) In the present day it is not necessary that generals should fight with their own hands, because it is only their duty to direct the movements of their followers.

(d) But in ancient times kings were obliged to put themselves into the front of the battle, and fight like ordinary men with swords and other weapons.

(e) He was so remarkably active and powerful that he came through great personal dangers in which he must otherwise have been slain.

(f) Getting rid of fear, he entered the room of the king, whom he killed with one stroke of his sword. Just as he had done the murder, one of the grooms laughed in his sleep.

(g) He had no weapons excepting his sword, but his page had a bow and arrow. He took both from this little boy, and bade him stand at a distance.

SANSKRIT—PASS :—Second Paper

I. Either, What are the chief characteristics of a *Vidusaka*? Narrate the part played by the *Vidusaka* in the *Sakuntala*, mentioning some of his sensible utterings.

Or, (a) Describe the scene of re-union in the *Svapnavasavadatta*.

(b) What do you understand by *bhadatavakya*? Why is it so called? Quote or give in Sanskrit the substance of the *bharatavakya* in the *Svapnavasavadatta*.

2. Translate into English three only of the following *slokas*, of which either (d) or (e) must be one :—

(a) সরসিজ্জমমুবিজ্ঞ শৈবলেনাপি রম্য

মলিনমপি হিমাংশোল্লস লক্ষ্মীং তনোতি ।

ইয়মধিকমনোজ্ঞা বক্সেনাপি তবী
কিমিব হি মধুরাণাং মণ্ডনং নাকুতীনাং ।

(b) ন নময়িতুমধিক্যামস্মি শক্তো
ধনুর্বিদমাহিতসায়কং গৃহেযু ।
সহবসতিমুপেত্য যৈঃ প্রিয়ায়াঃ
কৃত ইব মুকুবিলোকিতোপদেশঃ ॥

(c) অয়মরবিবরেভাশ্চাতকৈর্নিষ্পতন্তি
হ'রিভিরচিরভাসাং তেজসা চাহুলিষ্টৈঃ ।
গতমুপরি ধনানাং বারিগভৌদরাণাং
পিহ্ননয়তি রথস্থে শীকবক্লিন্ননৈমিঃ ॥

(d) বিস্রজ্ঞ হরিণাশ্চরন্ত্যচকিতা দেশাগতপ্রভায়া
বৃক্ষাঃ পুষ্পকুলে সমুদ্রবিটপাঃ সর্বে দয়ারক্ষিতাঃ ।
ভূয়িষ্ঠঃ কপিলানি গোকুলধনাস্তক্ষেত্রবতো দিশো
নিঃসন্ধিধ্বমিদং তপোবনময়ং ধুমো হি বহুশ্রয় ॥

(e) শয্যা নাবনতা তথাস্ততসমা ন ব্যাকুলপ্রচ্ছদা
ন ক্লিষ্টং হি শিরোপধানমমলং শীর্ষাভিধাতোর্বধৈঃ !
রোগে দৃষ্টিবিলোভনং জনয়িতুং শোভা ন কাচিৎ কৃত
প্রাণী প্রাপ্য রাজা পুনন শয়নং শীঘ্রং হয়ং মুকুতি ॥

(i) Name and expound the *simasa* in অধিক্যাম্ in (b).

(ii) Justify the absence of the singular number in পুষ্পকুলে in (d).

(iii) What is the significance of the expression অক্ষেত্রবতা in (d).

(vi) Write a grammatical note on শিরোপধানম্ in (e).

3. Express the meanings of any four of the following in simple Sanskrit words :—

- রক্তোপনিপাতিনোহনর্বাঃ ।
- তপঃবড়ভাগমক্ষ্যাম্ ।
- পর্যতিসক্যানমধীক্যতে যৈঃ বিজেতি ।
- রাজবংশ্যানামুদ্রাস্তময়প্রভুঃ ।
- সীমামিবাস্বরতলস্ত বিশজ্যমানাম্ ।
- বিশ্বগগণরজৌবিকীর্ণগুণা ।

4. Write explanatory notes on any three of the following :—

- তস্মিন্ সর্বমধীনং হি যত্রাধীনো নরাধিপঃ ।

- (b) বাজা ঘেৰা বড় বিমুচোহ বাপ্পং ।
 প্রাপ্তানুগা বাতি বুদ্ধি: প্রসাদম্ ।
 (c) এবং লোকঈল্যধৰ্ম্মো বনানাং ।
 কালে কালে ছিত্ততে রূহতে চ ।
 (d) উৎসুক্যমাত্ৰমবসায়য়তি প্রতিষ্ঠা ।
 (e) পরিগ্রহহৃৎপি যে প্রতিষ্ঠে কুলস্ত মে ।
 (f) অস্মহে এরিসী সৰক্ষপদা ইমস্ সন্তাবেণ অহং রমামি ।

- (i) Account for the *vibhakti* in তস্মিন্ in (a).
 (ii) Derive আনুগ্য in (b).
 (iii) Comment on the form ভূল্যধৰ্ম্ম :—in (c).

5. Answer any two of (a), (b), and (c) :—

(a) What dramatic purpose is served by the episode of the merchants' shipwreck in the *Sakuntala* ?

(b) Either, Give Prakrit equivalents for any five of the following words :—

সমুদাচাৰ, শ্ৰেণিতা, পরিত্যজতি, প্রতিহত, যুগপোতক, নির্মক্ষিক, নিঃসংশয়, অপরাধ ।

Or, Render into Sanskrit any two of the following extracts :—

- (i) এনা থু মহাঅরাণং অবিণআদো কাসকুহ্মমরেশুণা পভিনেণ সোদরা মে দিষ্টী ।
 (ii) জুজ্জই, ন থু এসো উজ্জইগীহুন্নহো । সৰজনমনোভিৰামং থু সোভসংগং গাম ।
 (iii) কো অবরো অবরেনসো তুম্হাণং রাআণং গীবারহুটভাঅং অম্হাণং উবহরন্ত ভি ।

(c) Refer to the *slokas* of the *Svapnavasavadatta* from which may be gathered the facts of Vasavadatta's pupilage to Udayana and of her subsequent elopement.

6. Refer to the context and explain in Sanskrit or in English either of the following *slokas* :—

- (a) অস্মান্ সাধু বিচিন্ত্য সংযমধনামুচৈঃ কুলধাস্থনম্
 ত্বয্যস্তাং কথমপ্যাবাক্ষবক্তাং শ্ৰেহপ্রবৃত্তিক্ তাম্ ।

সামান্তপ্রতিপত্তিপূর্বকমিয়ং দারেবু দৃশ্যা ত্বয়া
 ভাগ্যায়ত্তমতঃ পরং ন খলু তত্যাচ্যং বধুবদ্ধতিঃ ।

- (b) প্রাণানামনিলেন বৃত্তিরচিতা সংকল্পবৃক্ষে বনে
 তোরে কাঞ্চন পদ্মরেণুকপিশে ধৰ্ম্মাভিসেকক্রিয়া ।

ধ্যানং রত্নশিলাতলেষু বিবুধস্ত্রীসন্নিধৌ সংযমো
 কাঙ্ক্ষন্তি তপোভিরন্তম্নয়ন্ত্যশ্মিতপতন্ত্যমী ॥

7. Translate into Sanskrit any five of the following :—

(a) As a general rule, pointing out the right way leads to immediate wrath, as the showing of a mirror to one whose nose has been cut off.

(b) Coolness indeed is your quality, and next to that a natural clearness; what are we to say? Other impure things become pure by touching you.

(c) Every day when one gets up from one's bed, one must consider what good action is to be done to-day; the sun goes to its setting every day taking away a part of one's life. •

(d) The body of King Dasaratha was placed in a cask of boiling oil, and his funeral took place after a long time.

(e) If he creates and then destroys creatures, nevertheless devoutly concentrating my mind I adore him: the three worlds are empty, he indeed is lord.

(f) He who marries a maiden of good birth adorned with virtue and does not love her, is said to be exceedingly wicked.

(g) In three years, in three months, in three fortnights, in three days, a man eats the fruit of very great merit and sin even in this world.

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SANSKRIT—PASS—Third Paper

1. Translate into English any two of the following passages :—

(a) सा सगणदमवारी—“पूत्र, कालववनशीपे कालगुप्तनाम्ने वणिजः कञ्चुचिदेवा ह्युता ह्युता नाम रज्ज्वास्तवेन निजकान्तेनागच्छन्ती जलधौ मये प्रवहणे निजधात्र्या मया सह कलकमेकमासात् दैवयोगेन कुलमुपेता आसन्नप्रसवा कञ्चाक्षिदट्यामास्रजमभूत् । ममभू मन्त्रागतया बाले वन्त्रमातङ्गेन गृहीते मन्दितीया परित्रमन्ती 'योदुशवर्धनस्तत्र उर्ध्वपुत्रसिद्धौ भविष्यती'ति सिद्धवाक्विश्वामित्रोऽस्मिन् पुण्याश्रमे तावन्तः समयः नीत्वा शोकमपारं लोभमसमर्था समुच्छलिता वैश्वानरे शरीरमाहतीकर्तुमुद्वाञ्छासीदिति ।

(b) इत्येवमुपवाचायानन्त तपोधन परिषदा स महामुनिः प्रत्यावदत् । “अतिमहद्दिनमाकर्ण्यमाख्यातव्यम् । अज्ज्ञेश्वरमहः प्रत्यासीदति च नः ज्ञानसमयः । भवतामप्यात्तिक्रामति देवार्चनविधिबेला तद्वृष्टिस्तु भवन्तः । सर्व एव तावदाचरन्त यथोचितदिवसव्यापारम् । अपराह्णसमये भवतां पुनः कृतमूलकला शनानां विश्वकोपविष्टानामादितः प्रवृत्ति सर्वमावेदयिष्यामि—‘योहम्, यच्चानेन कृतमपस्मिन् अज्यनि, ईहलोके यथाश्र सङ्गतिः’ । अज्ज्ञ च तावदपगतकर्मः क्रियतामाहारेण”ति ।

(c) ভগবন্, ষালবরাজঃ এবলেন দৈববলেন মাং নির্জিত্য মন্তোয়াং রাজ্যমনুভবতি । তদদহ-
মপি তপো বিরচ্য তমরাতিমূলময়িত্বামি ভবৎ কারুণ্যেনেতি নিরমবস্ত্রং ভগবন্তং প্রাপ্ণবমিতি ।
ততঃকালজ্ঞপ্তপোধনো *রাজানমুবাচ—“সখে, শরীরকাত্ত্বেকারিণা তপসাহলম্ । অচিরেণৈব
সকলরিপুমদনো রাজনন্দনো ভবদক্ষমলকরিত্তি, কক্ষন কালমাস্থ” ইতি । গগনচাৰিণ্যাহপি বাণ্যা
সত্যমেতদিত্যবোচি ।

2. (a) Account for the case-ending in any *three* of the words underlined :—

- (i) দেবদত্তঃ শতং দণ্ডয়তি রাজা ।
- (ii) বাহয়তি ভারং ভূতান প্রভুঃ ।
- (iii) আহুয় শুকনাসায় তং স্বপ্নমকথয়দ্ রাজা ।
- (iv) প্রজ্ঞানামেব ভূত্যৰ্ধং স তাত্তো বলিমগ্রহীৎ ।
- (v) ভাৰ্ঘ্যামীত তি যজ্ঞদত্তঃ ।

(b) Name and expound the *samasas* in any *three* of the following, noting grammatical peculiarities :—

- (i) অকুতোভয়ম্ ; (ii) উপশরদম্ ; (iii) চিত্রগুঃ ; (iv) শ্রিয়সর্পিঞ্চঃ ; (v) বাচোবুদ্ধিঃ ।

(c) Substitute one word for any *two* of the following underlined expressions :—

- (i) পিণাকপানিং পতিমাণ্ড মিচ্ছতি ।
- (ii) এগ্ৰস্ত অক্ষিনী ইব অক্ষিনী যন্তাঃ সা ময়া দৃষ্টা ।
- (iii) পরিগয়েন পাণিগৃ হীতো যন্তাঃ সা ন ত্যজ্যা ।

(d) Give the feminine form of any *two* of the following :—ধনক ; মনুজ ; উদচ্ ; তিৰ্য্যচ্ ।

(e) Derive any *four* of the following indicating the sense :—জিগমিষু ; ষীমাংসক ; বৈয়াসিক ; পাণিনীয় ; বৈমাভূর ।

(f) Decline any *six* of the following :—অনভূহ in the instrumental plural ; প্রত্যচ্ in the locative singular ; দধি in the instrumental singular ; বৰ্ধাজ্ in the nominative dual ; প্রধী in the locative singular ; বন্ in the accusative singular ; মঘবন্ in the nominative plural ; তুরাবাহ্ in the nominative singular.

(g) Conjugate any *two* of the following roots :—দূহ in লট্ and লঙ্ third person singular ; হ্রী in লট্ and লঙ্ third person plural ; শী in লট্ third

person dual and plural; পি (to drink) in পিট and পিট third person singular.

(h) Correct the error in any five of the following:—

- (i) মুর্খবাক্যঃ রক্ষিতঃ ভিষগ্ বৃত্তে ।
- (ii) পন্নিতো গৃহস্থ গাবশ্চরন্তি ।
- (iii) ধনপতিগৃহাদ্রুতরেন মে গৃহম্ ।
- (iv) গভূনাং ষট্ অতীতাঃ ।
- (v) ধনিং ধনং বাচিতং ভিক্ষুণা ।
- (vi) দিবসে ত্রিঃ সন্ধ্যাঃ পাসীত ।
- (vii) আচাৰ্য্যানী ছাত্রানধ্যাপয়তি ।

3. *Either*, Discuss the statement : 'It is only in a very restricted sense that the *Mahabharata* is called an epic or a poem, for in a certain sense it is not one poetic production but a whole literature.'

Or, Give a survey of the different strata in the composition of the *Mahabharata* and their chronology.

Or, Write a note on Kalidasa and his date.

4. *Either*, Write a note on the Puranas and their influence on India's literature, culture, and religion.

Or, The prose romance and the Champus.

5. Write short notes on any five of the following:—Bilhana, Padmagupta, Dandin, Jayadeva. *Tantrakhyaika*, Hala, *Natyasastra*, Ksemendra, Mankhu.

1940.

HISTORY—PASS—First Paper

1. Discuss critically one of the following:—

(a) 'India beyond all doubt possesses a deep underlying fundamental unity—a unity which transcends the innumerable diversities of blood, colour, language, dress, manners, and sect.'

(b) 'Although the direct effects of Alexander's expedition to India appear to have been very small, yet his conquest of the Punjab broke down the wall of separation between the West and East and opened up distinct lines of communication between them.'

2. Give a short account of Asoka, his empire, and his ideal of kingship.

3. Briefly describe the history of the Satavahana rulers of the Deccan, with special reference to the exploits of Gautamiputra Satakarni.

4. Describe the conquest of Samudra Gupta, and attempt an estimate of his greatness.

5. Sketch the early history of Tamil country, and describe its maritime trade with the Roman empire.

6. Write critical notes on any three of the following:—

(a) the Indo-Greek princes, (b) Gupta art, (c) the Pallavas of Kanchi, (d) the origin of the Rajputs, (e) the Palas of Bengal, (f) Hiuen Tsang's travels in India.

7. Give an account of the conquest of northern India by Muhammad Ghori and his lieutenants.

8. Sketch the reign of 'Ala'u'd-din Khilji and his conquest of southern India.

9. Narrate the history of the kingdom of Vijayanagar, with special reference to the accounts of foreign travellers.

10. Discuss the causes of the downfall of the Mughal empire.

11. Critically discuss one of the following passages:—

(a) 'In spirit of his failure, we cannot deny Dupleix's claim to greatness. His conceptions were daring and imaginative and required national and not a company's support.'

(b) 'Few were destined to do more permanent work than Lord Cornwallis, especially in the department of internal affairs.'

12. Describe the policy and the work of Lord Wellesley in the history of the establishment of the British empire in India.

13. Give an account of material progress and social reform in India under Lords William Bentinck and Dalhousie.

4. Write critical notes on any three of the following:—

(a) British policy towards Afghanistan (nineteenth century), (b) the annexation of the Punjab by Lord Dalhousie; (c) the conquest of Sind; (d) the suppression of the Pindaris; (e) the Tibet expedition under Lord Curzon; (f) the Permanent Settlement of the revenues of Bengal.

HISTORY—PASS—Second Paper,

Modern Europe (1648—1815)

1. Discuss the main features of the foreign policy of Louis XIV.
2. Describe the 'ascendancy of France' in the 'Age of Louis XIV' in its (a) political, (b) economic aspects.
3. Account for the failure of Sweden to establish an empire in Europe.
4. *Joseph II was the statesman par excellence of the age of reason' (RIKER). Explain fully. Account for his failure to arrest the decline of the Hapsburgs.
5. Narrate briefly the story of the Partitions of Poland.
6. Discuss briefly the causes of the American Revolution. What led to its success?
7. 'It was in France that the "old regime" was first to go to pieces' (RIKER). Explain why.
8. Write notes on—(a) Danton; (b) Robespierre; (c) the Jacobin club; (d) the Directory.
9. Describe Napoleon's 'Continental System'. Why did it fail?
10. How do you account for France's ready acceptance of Imperial monarchy under Napoleon so soon after the Revolution?
11. Why are the territorial adjustments at the Congress of Vienna 1815 criticized severely?
13. Write notes on any four of the following:—(a) Colbert; (b) the Battle of Waterloo; (c) the Revocation of the Edict of Nantes; (d) the Treaty of Kutchuk Kaniardji; (e) Maria Theresa; (f) the Duke of Marlborough.

HISTORY—PASS—Third Paper.

1. *Either*, 'Three chief principles moulded the Vienna Settlement'. Explain.
Or, Sketch briefly the European Settlement of 1815.
2. 'The period 1815 to 1850 was a time of *restless struggle between opposing forces.' Elucidate.
3. Write a short essay on the Industrial Revolution.

4. 'Napoleon III was a man to whom both history and historians have done scant justice.' Do you agree ?

5. 'It is doubtful if there was a more unnecessary war than the Crimean war.'

'The indirect results of the Crimean war were greater than its direct results.'

Explore the truth in the above statements.

6. *Either*, 'Italy as a nation is the legacy, the lifework of Cavour'. Discuss.

Or, Trace the history of German unity.

7. 'One of the principal features of the nineteenth century has been the Europeanization of the world.' Illustrate.

8. 'The Great War was more than an international conflict ; it was a revolution.' Explain.

9. 'The career of Abraham Lincoln was in a sense as remarkable a phenomenon of modern democracy as that of Napoleon Bonaparte.' Discuss.

10. Write notes on any four of the following :—(a) the Holly Alliance ; (b) Karl Marx ; (c) the League of Nations ; (d) Garibaldi ; (e) the Monroe doctrine ; (f) the Entente Cordiale ; (g) the Battle of Jutland ; (h) the Tientsin Treaties.

PHILOSOPHY—PASS—First Paper

1. Indicate the scope of psychology.

State briefly the subject-matter of each of the following :—(a) experimental psychology, (b) abnormal psychology, (c) physiological psychology.

2. What is sensation ? It is a kind of feeling ?

What are the sense-organs ? What are their functions ?

3. How does the idea of space arise through vision and touch ?

4. Explain, with examples, the laws of association.

How is forgetfulness possible if these laws are true ?

5. How is feeling related to thinking and willing ?

What are the egoistic feelings ? Are they always harmful ?

6. What is an instinct? Does man possess any instinct?

How is it distinguished from a habitual action, and from an ideo-motor action?

7. Take a concrete example of the feeling of the ludicrous, and analyse its factors.

8. Write short notes on (a) threshold of consciousness, (b) apperception, (c) the unconscious, (d) behaviourism.

PHILOSOPHY—PASS—Second Paper

1. Determine the relation between Ethics and Metaphysics.

2. Can there be a science of ethics, seeing that different people have different notions of good and bad?

3. Bring out the main implications of the moral judgement.

4. Give a brief analysis of moral consciousness.

5. Explain and criticize the different types of Hedonism.

6. Explain and examine the dictum 'ought implies can'.

7. Discuss the different theories of punishment.

8. What end do we really seek to attain when we act morally? Discuss.

PHILOSOPHY—PASS—Third Paper

1. Is there really any distinction between Philosophy and Science? Explain the philosophic as distinguished from the scientific attitude.

2. Explain the nature of consciousness as essentially a relation between subject and object.

3. 'Psychological states regarded objectively are nothing but physiological processes.' Discuss this view, and explain how far the materialistic hypothesis can be scientifically maintained.

4. Explain the nature of space and time. Discuss their importance in connexion with the problem of the reality of the world.

5. Give a critical exposition of the conception of self.
 6. What is the meaning of evolution? Does the same law of development hold good in the organic as well as the mental world.
 7. 'Finite beings are ruled by necessity.' Give a critical exposition of this view.
 8. What are the grounds for thinking that the self survives the dissolution of the physical organism.
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ECONOMICS—PASS—First Paper.

1. Elaborate the following definition of Economics :—'Political Economy or Economics is a study of man's actions in the ordinary business of life.'
 3. Wool and mutton are jointly produced. Discuss the effect of changes in the supply of, and demand for, wool upon the price of mutton.
 3. Distinguish between 'prime cost' and 'total cost'. Is the distinction valid for the long period?
 4. Why does small-scale production still persist in many industries?
 5. 'Money is what money does.' Explain this statement.
 6. How are wages determined? What relation, if any, do they have to the standard of life of the worker?
 7. A shopkeeper in a fashionable street says that he charges high prices for his goods because he has to pay a high rent for his premises. Is this contention valid? Examine it carefully.
 8. Explain what you understand by the Gold Bullion Standard and the Gold Exchange Standard.
 9. Explain with examples why certain countries export more than they import while others import more than they export.
 10. Discuss the main purposes for which loans and taxes should be used by the State.
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ECONOMICS—PASS—Second Paper.

1. What is meant by the organismic theory of the State? How far is this theory a satisfactory explanation of the nature of the State?

2. (a) 'An unlawful Sovereignty is a contradiction in terms.'

(b) 'An unalterable law is a legal impossibility.'

Examine these statements.

3. What do you mean by the 'constitution' of a country? How does a written constitution grow?

4. What is the nature of International Law? To what extent does it constitute a limitation upon the sovereignty of a State?

5. How does a federal Union differ from (a) an alliance, (b) a confederation, and (c) a unitary State?

6. Discuss the position and powers of the Crown in the English Constitution, with special reference to legislation and the dissolution of Parliament.

7. How does the parliamentary form of government differ from the presidential form? Illustrate your answer.

8. Discuss the position of the Governor in relation to his ministers under the present Constitution of India.

9. Discuss the nature and extent of the legislative powers of the the Governor-General as provided for by the Government of India Act, 1935.

10. Discuss the merits and defects of the party system.

ECONOMICS—PASS—Third Paper.

1. Estimate the importance of cottage industries in the rural economy of India. How can these be made more efficient?

2. Discuss the possible dangers of employing foreign capital in developing the natural resources of India. Under what conditions can foreign capital be allowed to take a share in the development of a country's resources?

3. What do you understand by 'discriminating protection'? How far has this policy been successful in developing Indian industries?

4. Give an account of the Reserve Bank of India. What are its relations to the rest of the banking system of this country?

5. Describe the financial needs of Indian industries. Do you advocate the establishment of industrial banks in India ?

6. Discuss the scope and functions of land mortgage banks. Have any land mortgage banks been established in Bengal ?

7. Indicate the principles on which land revenue is assessed in the *ryotwari areas*.

8. How far is it true to say that over-population is the main cause of India's poverty ?

9. Describe the main features of the present sterling exchange standard of India. What are its merits and defects ?

10. Describe the existing allocation of financial resources as between the Central Government and the Provincial Governments. Could you suggest any measures by which the financial resources of the Government of Bengal may be augmented ?

BENGALI—VERNACULAR

1. *Either, (b) Discuss how far Devi Chaudhurani may be called a historical novel ?*

Or, (b) Why does Bankim Chandra warn his readers against attributing any historical importance to this novel ?

2. Fully explain the following passage with reference to its context :—

“এখন এসো প্রফুল্ল, একবার লোকালয়ে দাঁড়াও, আমরা তোমার দেখি। একবার এই সমাজের সম্মুখে দাঁড়াইয়া বল দেখি, ‘আমি নতন নহি, আমি পুরাতন’।”

3. Explain (a) and any two of the rest, with reference to their context, unfolding allusions where necessary:—

(a) কুহুমেশ্বর বসি কুতূহলে

হানিল কুহুমধন টাকারি কোতুকে

শরজাল প্রেমামোদে মাতিয়া ত্রিশূলী

লজ্জাবশে রাহ আসি আসিলা চাঁদরে

হাসি ভয়ে মুকাইল দেব-বিভাবদ ।

(b) বিশ্বরমে, এ বিবে ও রাজা পা টুহখানি

বিষের আকাখা.....কোন

পৃথকলে লভিল এ স্থখ দাস কহ না আনারে ।

- (c) ক্লাস্ত বিশ্বের শেষ, তিনিও আপনি
চকল সতত এবে ছাড়িতে কনক
লকা পুরী।
- (d) জিজ্ঞাসিও বিজ্ঞ জটায়ুরে
ত্রাণকে না পার যদি, অধিকার পদে
কহিও এ সব কথা।

4. Explain the following passages with reference to the contexts :—

(a) না যখন সশক বিলাপে পন্নীর নিজা দূর করিয়া দেয়, তখন যে শুদ্ধ মাত্র পুত্র-শোক প্রকাশ করে তাহা নয়, পুত্র শোকের গৌরব প্রকাশ করিতেও চায়। শোক-প্রকাশের জন্য বেঁটুকু করা স্বাভাবিক, তাহার চেয়ে হ্রস্ব চড়াইয়া না দিলে চলে না।

(b) জাতীয় ভাষার বিলোপ না ঘটাইয়া অল্প প্রদেশবাসীদিগকেও সেই ভাষা শিখিবার পথ স্থগম করিয়া দেওয়া হউক। প্রত্যেক প্রদেশ স্ব স্ব জাতীয় ভাষায় সর্বদ্বাদীন উন্নতিসম্পন্ন হইয়াও অল্প প্রদেশের ভাষায় বাহা গ্রহণ-যোগ্য তাহা স্ব স্ব ভাষার অন্তর্ভুক্ত করিয়া লউক।

5. Expand the sense contained in the following—

স্থখ দুঃখ দুটি ভাই
স্থখের লাগিয়া যে করিবে আশ
দুঃখ যাবে তার ঠাই।

6. Join the following short sentences to form one sentence :—

- (a) সে ছেলেটি বেশী কথা বলে না।
(b) দিবারাত্রি অপর ছেলেরা তাহাকে বিরক্ত করিত।
(c) এজন্য আমার বড় কষ্ট হইত।

7. Correct the errors in the following passage :—

মেরেটির বয়স্কর বোল। তাহার সজ্জাত ভাইটিকে রক্ষনা-বেক্ষণের ভার তাহার উপরে ছিল। পিতা মাতার অবস্থা স্বচ্ছল ছিল না হুতরাং তাহাকে সর্বদা মনোকেটে থাকিতে হইত। কিম্বদন্তী আছে এক সময়ে তাহাদের অবস্থা খুবই ভাল ছিল। কোন বিপদে পড়িয়া কষ্টাটির পিতামহ সর্ববাস্ত হন, তদবধি দারিদ্র্যের পোড়নে তাহারা অস্থিরতা হইয়া থাকিত। সে কুত্রাপিও বাড়ী ছাড়িয়া বাইত না। অল্প পরিবারের কোন কথাবার্তায় সে থাকিত না।

8. Translate one only of the two passages into Bengali—

(a) The world seems to be unhinged nowadays: The principles which, like strong pillars, supported our society in the past—the virtues of forbearance, sympathy, and brotherhood, are showing symptoms

of crumbling down. The political leader of the present day declares that the virtues on which our ancestors prided themselves are not fit for the struggle which men have to face in this age of competition and international trade relations; they have an innate weakness which does not guarantee success in the hour of national peril. The qualities of truth and mercy and the sanctity of pledges were given undue precedence by the ancients. On the other hand tactics and adaptation of a policy to the exigencies of the situation may help in a far greater degree to override the present danger.

(b) Dark mystery still broods over the Anglo-Soviet negotiations in Moscow; a wide variety of sinister rumours are current about the cause of this long delay. Fortunately some of these cancel one another out; although the prospects are obviously less promising than they seemed six or eight weeks ago, the balance of probability still seems to be slightly in favour of some pact being eventually reached. This might in itself suffice to deter Herr Hitler from risking his regime's and humanity's future in the final desperate hazard of war.

9. Write an essay in Bengali on any one of the following subjects:—

(a) War and peace.

(b) The industrial problem of India.

(c) Bengal of the present day compared with what she was fifty years ago.

, MATHEMATICS—PASS—First Paper

Group A

1. (i) Determine the value of $\sin 18^\circ$.

(ii) If $\sin \alpha + \sin \beta = a$ and $\cos \alpha + \cos \beta = b$, find the value of $\tan \frac{1}{2}(\alpha - \beta)$.

(iii) Solve $\cos x - \sin x = \sqrt{2}$.

2. (i) If A, B, C are the three angles of a real plane triangle, prove that the two relations

$$\sin^2 A + \sin^2 B + \sin^2 C = \sin B \sin C + \sin C \sin A + \sin A \sin B$$

$$\text{and} \quad \cot A + \cot B + \cot C = \sqrt{3}$$

are equivalent to one another, and that either of them may be taken to characterize an *equilateral* triangle.

(ii) If in a triangle the radius of the circumscribed circle is double the radius of the inscribed circle, show that the triangle is equilateral.

3. (i) If $\tan^{-1}x + \tan^{-1}y + \tan^{-1}z = \pi$, show that $x + y + z = xyz$.

(ii) Solve : $\sin^{-1}x + \sin^{-1}y = \frac{2}{3}\pi$, $\cos^{-1}x - \cos^{-1}y = \frac{1}{3}\pi$.

4. (i) Find all the values of $(1+i)^{\frac{1}{7}}$.

(ii) Solve $x^5 = 1$ by De Moivre's Theorem, and prove that the sum of the n th powers of the roots of the equation, n being an integer not divisible by 5, is zero.

5. (i) Sum to n terms the series

$$\sin \alpha \sin 2\alpha + \sin 2\alpha \sin 3\alpha + \sin 3\alpha \sin 4\alpha + \dots$$

and hence deduce the sum of the series

$$1.2 + 2.3 + 3.4 + \dots \text{to } n \text{ terms.}$$

(ii) Sum to infinity the following series :

$$\cos \theta - \frac{1}{3} \cos 3\theta + \frac{1}{5} \cos 5\theta - \dots$$

6. (i) Expand $\sin^7 x$ in a series of sines of multiples of x .

(ii) If x be less than 1, prove that

$$\frac{\sin \theta}{1 - 2x \cos \theta + x^2} = \sin \theta + x \sin 2\theta + x^2 \sin 3\theta + \dots$$

Group B

7. (i) Find the equation to the straight line passing through the intersection of the lines $x + 2y + 3 = 0$ and $3x + 4y + 7 = 0$ and perpendicular to the straight line $y - x = 8$.

(ii) Prove that the equation $y^3 - x^3 + 3xy(y - x) = 0$ represents three straight lines equally inclined to one another.

8. (i) Transform to axes inclined at 45° to the original axes the equation : $x^2 - y^2 = a^2$.

(ii) By transforming to parallel axes through a properly chosen point (h, k) , prove that the following equation can be reduced to one containing only terms of the second degree :

$$12x^2 - 10xy + 2y^2 + 11x - 5y + 2 = 0.$$

9. (i) A point moves so that the sum of the squares of its distances from the four sides of a square is constant ; prove that it always lies, on a circle.

(ii) Find the four common tangents to the circles

$$x^2 + y^2 - 22x + 4y + 100 = 0 \quad \text{and} \quad x^2 + y^2 + 22x - 4y - 100 = 0.$$

10. (i) If a circle be drawn so as always to touch a given straight line and also a given circle, prove that the locus of its centre is a parabola.

(ii) Prove that the normal chord of a parabola at the point whose ordinate is equal to its abscissa subtends a right angle at the focus.

11. (i) Find the equation of the ellipse referred to its centre, whose latus rectum is 5 and whose eccentricity is $\frac{3}{5}$.

(ii) Find the latus rectum, the eccentricity, and the coordinates of the foci of the ellipse $5x^2 + 4y^2 = 1$.

(iii) If the pole of the normal at P lies on the normal at Q, P and Q being two points on an ellipse, show that the pole of the normal at Q lies on the normal at P.

12. (i) In the hyperbola $16x^2 - 9y^2 = 144$, find the equation to the diameter which is conjugate to the diameter whose equation $x = 2y$.

(ii) Find the asymptotes of the curve $2x^2 + 5xy + 2y^2 + 4x + 5y = 0$.

MATHEMATICS—PASS—Second Paper

Group A

1. Define the terms 'limit' and 'differential coefficient'.

Find from the definition the differential coefficient of $\tan x$.

2. Find $\frac{dy}{dx}$ for any three of the following: (i) $y = \frac{x^4}{\sin x}$,

(ii) $y = (\log \sin x)^2$,

(iii) $y = \sec(\tan^{-1} x)$,

(iv) $y = x^n$,

(iv) $\log xy = x^2 + y^2$.

3. (i) In the curve $x^{\frac{2}{3}} + y^{\frac{2}{3}} = a^{\frac{2}{3}}$ prove that the portion of the tangent intercepted between the axes is of constant length.

(ii) Find the equation of the normal at any point on the curve given by $x = 3 \cos \theta - \cos^3 \theta$, $y = 3 \sin \theta - \sin^3 \theta$.

- 4. (i) If $y = a \cos (\log x) + b \sin (\log x)$, show that

$$x^2 \frac{d^2 y}{dx^2} + x \frac{dy}{dx} + y = 0.$$

- (ii) Apply Maclaurin's theorem to prove that

$$\tan^{-1} x = x - \frac{x^3}{3} + \frac{x^5}{5} - \dots + (-1)^{n-1} \frac{x^{2n-1}}{2n-1} + \dots$$

5. (i) Find an expression for the radius of curvature of a curve $f(x, y) = 0$.

- (ii) For the catenary $y = a \cosh \frac{x}{a}$, show that the radius of curvature is $\frac{y^2}{a}$.

Group B

6. Define a definite integral as the limit of a sum, and hence show that

$$\int_a^b \sin x \, dx = \cos a - \cos b.$$

7. Find any three of the following :

$$(i) \int \frac{x \sin^{-1} x \, dx}{\sqrt{1-x^2}}, \quad (ii) \int \frac{xe^x}{(1+x)^2} dx, \quad (iii) \int \frac{(x^2+1)dx}{x(x^2-1)},$$

$$(iv) \int_0^{\frac{1}{2}\pi} \sin x \sin 2x \, dx, \quad (v) \int_0^{\frac{1}{4}\pi} \sec^3 x \, dx.$$

8. Show that the perimeter of the cardioid $r = a(1 - \cos \theta)$ is $8a$.
Find its intrinsic equation.

9. Show that the area of a loop of the curve

$$x(x^2 + y^2) = a(x^2 - y^2)$$

is $2a^2(1 - \frac{1}{2}\pi)$, and that the volume formed by the revolution of the loop about the x -axis is $2\pi a^3(\log 2 - \frac{1}{2})$.

10. (i) Find the curves for which the Cartesian sub-normal varies as the square of the radius vector.

(ii) Solve one of the following equations :

$$(1) \frac{dy}{dx} + \frac{y}{x} = x^2,$$

$$(2) y = A \left(\frac{dy}{dx} \right)^3 + B \left(\frac{dy}{dx} \right)^2.$$

11. Solve any two of the following :

$$(i) \frac{d^3y}{dx^3} - 3 \frac{dy}{dx} + 2y = 0,$$

$$(ii) \frac{d^2y}{dx^2} + 2 \frac{dy}{dx} + y = 0,$$

$$(iii) \frac{d^2y}{dx^2} + y = \sin x.$$

MATHEMATICS—PASS—Third Paper

Group A

1. Prove experimentally that, if any pressure be applied to the surface of a fluid, it is transmitted equally to all parts of the fluid.

Illustrate this principle to prove the working of Bramah's hydraulic press.

In a Bramah's press the area of the larger piston is 100 square inches and that of the smaller one is $\frac{1}{4}$ square inch; find the force that must be applied to the latter that the former may lift 1 ton.

2. Prove that the pressure of a heavy homogeneous liquid at all points in the same horizontal plane is the same and establish that the surface of a heavy liquid at rest is horizontal.

Find the total thrust on each of the plane ends of a circular cylinder, of height h and radius of base a , the middle point of the cylinder being at the depth c below the surface of the fluid, and its axis being inclined at an angle θ to the vertical.

3. A substance whose density is ρ , is weighed by means of weights, whose density is ρ' . If σ be the density of the air, find the true weight corresponding to any apparent weight.

A cylinder of wood, whose weight is 15 lb. and length 3 ft., floats in water with its axis vertical and half immersed in water. What force will be required to depress it six inches more?

4. Determine the specific gravity of a liquid with the aid of a common hydrometer.

A diving bell is lowered into water; find the amount of air at atmospheric pressure that must be forced in so that the water may not rise within the bell.

5. Two volumes, v_1 , and v_2 , of different gases at different pressures, p_1 and p_2 , are mixed together and put into a vessel of volume V ; find the resulting pressure, the temperature being constant.

A cylinder contains two gases which are separated from each other by a movable piston. The gases are both at 0°C . and the volume of one gas is double that of the other. If the temperature of the first be raised to t° , prove that the piston will move through a space $\frac{2lat}{9+6\alpha t}$,

where l is the length of the cylinder, and α is the coefficient of expansion per 1°C .

6. Find the centre of pressure of a triangle immersed in a liquid with a vertex in the surface and the opposite side horizontal.

An equilateral triangle, each of whose sides is $6\sqrt{3}$ feet long, is immersed vertically in water with its sides in the surface, which is open to the air. If the water barometer stands at 34 feet, find the depth of the centre of pressure of the triangle, the atmospheric pressure being taken into account.

Group B.

7. Define—ecliptic, celestial latitude, terrestrial latitude, zodiac.

How far is the pole of the ecliptic from the celestial pole?

Calculate what would be the declination and right ascension of the sun on 21 April, if the changes in these quantities were uniform throughout the year.

What is the hour angle of the sun at sunrise on 21 March ?

8. How do you eliminate the error of eccentricity of the meridian circle ? Find the zenith point on the meridian circle.

How far should a man travel northwards from the equator in order that the altitude of the pole might become 10° ? Assume the radius of the earth to be 4,000 miles.

9. Find the coefficient of refraction by Bradley's method. What is the advantage of this method, and what is its disadvantage ?

Show how, by solving a spherical triangle, the time of sunset or sunrise can be calculated for any place at a given date.

10. Prove that the velocities of two planets round the sun are inversely as the square roots of their distances from the sun.

Enumerate the different causes which produce an apparent change in the position of a body, and state the change produced in each case.

11. Explain the phenomenon of the 'harvest moon'.

How does the duration of twilight at a given place alter with the season of the year ?

Find the lowest latitude at which it is possible for twilight to last all night.

12. Find the maximum number of eclipses of the sun and the moon in a year.

State the causes to which the equation of time is due.

Given that the sun rose on a certain date at 6 h. 56 m. and set at 4 h. 32 m.; find the equation of time.

1941

English (B)—Pass—First Paper.

1. Either, Describe the character of Jaques, and show that "his character affords a complete antithesis to the Duke's".

Or, Sketch the character of Rosalind, and show that "she is wit and womanliness in equal proportions".

2. Either, What are the moral lessons that may be drawn from *As you like it*? Give illustrative references in support of your answer.*

Or, Point out the main characteristics of Shakespearean Tragedy, as illustrated in *Othello*.

3. Either, Sketch the character of Othello, indicating clearly the causes of his downfall.

Or, Discuss the character of Iago.

4. Give an analysis of either *Ode to Duty* (WORDSWORTH), or *To A Nightingale* (KEATS), and add a critical appreciation of the poem you select for analysis.

5. Explain any four of the following passages, taking at least one passage from each Group :—

GROUP A.

- (a) Here feel we but the penalty of Adam,
The seasons' difference, as the icy fang
And churlish chiding of the winter's wind,
Which, when it bites and blows upon my body,
Even till I shrink with cold, I smile and say
"This is no flattery : these are counsellors
That feelingly persuade me what I am".

(b) Farewell, Monsieur Traveller : look you lisp and wear strange suits, disable all the benefits of your own country, be out of love with your nativity and almost chide God for making you that countenance you are, or I will scarce think you have swam in a gondola.

GROUP B.

- (c) My advocacy is not now in tune ;
My lord is not my lord ; nor should I know him,
Were he in favour as in humour alter'd.

- So help me every spirit sanctified,
 As I have spoken for you all my best
 And stood within the blank of his displeasure
 For my free speech.
- (d) For when my outward action doth demonstrate
 The native act and figure of my heart
 In compliment extern, 'tis not long after
 But I will wear my heart upon my sleeve
 For daws to peck at : I am not what I am.

GROUP C.

- (e) To be a prodigal's favourite—then, worse truth,
 A miser's pensioner—behold our lot !
 O man ! that from thy fair and shining youth
 Age might but take the things Youth needed not !
- (f) Be it love, light, harmony,
 Odour, or the soul of all
 Which from Heaven like dew doth fall,
 Or the mind which feeds this verse
 Peopling the lone universe.

English (B)—Pass—Second Paper.

1. Either, Sketch the character of Garibaldi indicating those elements which contributed to his success as the liberator of his country.

Or, Hardy in his delineation of peasants and country people is more Wordsworthian than even Wordsworth himself. Discuss.

2. Either, Write a critical note on the psalms as devotional exercises, bringing out their special appeal for you.

Or, Indicate the special features of the gospel of St. John as a narrative of the life of Christ.

3. Either, Give in your own words the gist of Huxley's essay on Wordsworth and indicate to what extent you support it.

Or, Give your impressions about Hazlitt's character and personality from your study of his essay.

4. The Swiss officer in *Arms and the Man* is not a conventional soldier. Discuss with illustrative references from the text.

Or, Write a note on the character of Raina indicating to what extent you find it convincing.

5. Explain with reference to the context one passage from each of the following Groups :—

GROUP A.

(a) The interest of the life depends far more on the stature of the man than on the scale of his achievements.

Or, (b) Their poems, plays, biographies, novels are not books but note-books, and Time, like a good schoolmaster, will take them in his hands, point to their blots and scrawls and erasures, and tear them across ; but he will not throw them into the waste-paper basket.

Or, (c) The poet's place, it seems to me, is with the Mr. Hydes of human nature. He should be, as Blake remarked of Milton, "of the devil's party without knowing it"—or preferably with the full consciousness of being of the devil's party.

GROUP B.

(a) Luckily the whole scheme was so absurdly inadequate that it did not by partial success bring scandal and embarrassment on Italy and jeopardise the support, which Cavour was able to give Garibaldi himself.

Or, (b) But if their legs were weary, their hearts were light, not indeed with the assurance of victory, but with the sense that they were enviable above all Italians, that their unique campaign was poetry made real.

GROUP C.

(a) Their tongue is as an arrow shot out ; it speaketh deceit one speaketh peaceably to his neighbour with his mouth, but in heart he layeth his wait.

Or, (b) The thief cometh not, but for to steal, and to kill, and to destroy. I am come that they might have life, that they might have it more abundantly.

Or, (c) According as it is written, God hath given them the spirit of slumber, eyes that they should not see, and ears that they should not hear.

GROUP D.

(a) Not a bit. They all slashed and cursed and yelled like heroes. Psha ! the courage to rage and kill is cheap. I have an English

bull terrier who has as much of that sort of courage as the whole Bulgarian nation, and the whole Russian nation as its back. But he lets my groom thrash him, all the same.

Or, (b) Stuff and nonsense, Sergius ! That's quite enough fuss about nothing : a soldier's daughter should be able to stand up without flinching to a little strong conversation.

Or, (c) I would marry the man I loved, which no other queen in Europe has the courage to do. If I loved you, though you would be as far beneath me as I am beneath you, I would dare to be the equal of my inferior.

English (B).—Pass—Third Paper.

1. Give the substance of one of the following passages :—

(a) Practical people have little idea of the practical ability required to write a large book, and specially a large history. Long before you get to the pen, there is an immensity of pure business ; heaps of material are strewn everywhere ; but they lie in disorder, unread, uncatalogued, unknown. It seems a dreary waste of life to be analysing, indexing, extracting words and passages, in which one per cent. of the contents is interesting, and not half of that percentage will after all appear in the flowing narrative. As an accountant takes up a bankrupt's books filled with confused statements of ephemeral events, the disorderly record of unprofitable speculations, and charges this to that head, and that to this,—estimates earnings, specifies expenses, demonstrates failures : so the great narrator, going over the scattered annalists of extinct ages, groups and divides, notes and combines, until from a crude mass of darkened fragments, there emerges a clear narrative, a concise account of the result and upshot of the whole. In this art Gibbon was a master. The laborious research of German scholarship, the keen eye of theological zeal, a steady criticism of eighty years, have found few faults of detail. The account has been worked right, the proper authorities consulted, an accurate judgment formed, the most telling incidents selected.

(b) That from which the public character of Milton derives its great and peculiar splendour still remains to be mentioned. If he exerted himself to overthrow a forsworn king and a persecuting hierarchy, he exerted himself in conjunction with others. But the

glory of the battle which he fought for the species of freedom which is most valuable, and which was then the least understood, the freedom of the human mind, is all his own. Thousands and tens of thousands among his contemporaries raised their voices against Shipmoney and the Star Chamber. But there were few indeed who observed the more fearful evils of moral and intellectual slavery and the benefits which would result from the liberty of the press and the unfettered exercise of private judgment. These were the objects which Milton justly conceived to be the most important. He was desirous that the people should think for themselves as well as tax themselves, and should be emancipated from the dominion of prejudice as well as from that of Charles.

2. Write an essay on one of the following subjects :—

- (a) The old order changeth yielding place to new.
- (b) Citizenship and its responsibilities.
- (c) Indian Womanhood.
- (d) The moral worth of a nation.

3. Give the substance of one of the following :—

- (a) When the Gods heard, they straight arose, and took
Their horses, and rode forth through all the world ;
North, south, east, west, they struck, and roam'd the world,
Entreating all things to weep Balder's death.
And all that lived, and all without life, wept,
And as in winter, when the frost breaks up,
At winter's end, before the spring begins,
And a warm west-wind blows, and thaw sets in—
After an hour a dripping sound is heard
In all the forests, and the soft-strewn snow
Under the trees is dibbled thick with holes,
And from the boughs the snow loads shuffle down ;
And, in fields sloping to the south, dark plots
Of grass peep out amid surrounding snow,
And widen, and the peasant's heart is glad—
So through the world was heard a dripping noise
Of all things weeping to bring Balder back ;
And there fell joy upon the Gods to hear.

Lost Days.

- (b) The lost days of my life until today,

What were they, could I see them on the street
Lie as they fell ? Would they be ears of wheat
Sown once for food but trodden into clay ?
Or golden coins squandered and still to pay ?

Or drops of blood dabbling the guilty feet ?
 Or such split water as in dreams must cheat
 The throats of men in Hell, who thirst alway ?
 I do not see them here ; but after death
 God knows I know the faces I shall see,
 Each one a murdered self, with low last breath.
 ' I am thyself,—what hast thou done to me ? '
 ' And I—and I—thyself,' (lo ! each one saith,)
 ' And thou thyself to all eternity ! '

Bengali (Q)—Pass

1. *Either*, Describe the character and ideals of ভবানী পাঠক। Has the character of ভবানী পাঠক any historical basis ?

Or, Discuss the merits of Kritibas as a writer of Bengali Ramayana.

2. Explain fully the significance of the following statement of Bankim Chandra :—

মধুসূদন, হেমচন্দ্র, নবীনচন্দ্র, রবীন্দ্রনাথ—শিক্ষিত বাঙ্গালীর কবি ; ঈশ্বর গুপ্ত বাঙ্গলার কবি। এখন আর খাঁটি বাঙ্গালী কবি জন্মে না—জন্মিবার যো নাই—জন্মিয়া কাজ নাই।

3. Explain with reference to the context any *three* of the following passages :—

- (a) প্রমীলার বাঁয়েতর নয়ন নাচিল।
 আশ্রবিন্দুভিত্তে, হায়, অকস্মাৎ সত্তী
 মুছিল সিন্দুর-বিন্দু হৃদয় ললাটে !
- (b) বিধাতার অধিকার ল'য়ে এই ক্রোড়ে
 এসেছিলে একদিন, সেই অধিকারে
 আর কিরে সগৌরবে, আর নির্বিচারে,
 সকল ত্রাতার মাঝে মাতৃ-অঙ্কে মম
 লহ আপনার স্থান।
- (c) মাতঃ, স্মৃতপুত্র আমি, রাধা মোর মাতা,
 তা'র চেয়ে নাহি মোর অধিক গৌরব।
 পাণ্ডব পাণ্ডব থাক, কোরব কোরব,
 ঈর্ষা নাহি করি কারে'।

(d)

বন্ধ সরোবরে

করে কেলি রাজহংস পঙ্কজ-কাননে ;

যায় কি সে কড়ু, প্রভু, পঙ্কিল সলিলে,

শৈবাল দলের ধাম ?

4. Explain with reference to the context any two of the following passages :—

(a) প্রারম্ভের পূর্বেই যত হিসাব নিকাশ, যত ইতস্ততঃ ; একবার কাজ আরম্ভ করিয়া দিলে যদি মনের বল থাকে, তবে ষ্টমরোলায়ের মত, সমস্ত উচ্চনীচ সমান করিয়া চলিয়া যাওয়া বেশী কথা নহে।

(b) জাতীয়তাবাদ ফুটাইতে হইলে—সকলকে এক, অদ্বিতীয় জাতীয়তায় স্মরে গাঁথিতে হইলে জাতীয় সাহিত্যে একতা-বন্ধনের চেষ্টা করিতে হইবে।

(c) মন প্রকৃতির আরশি নহে, সাহিত্যও প্রকৃতির আরশি নহে। মন প্রাকৃতিক জিনিষকে মানসিক করিয়া লয়—সাহিত্য সেই মানসিক জিনিষকে সাহিত্যিক করিয়া তোলে।

5. Amplify the idea contained in :—

বিপদে মোরে রক্ষা কর, এ নহে মোর প্রার্থনা

বিপদে আমি না যেন করি ভয়।

দুঃখ তাপে ব্যথিত চিতে নাই বা দিলে সাঙ্খ্যনা

দুঃখ যেন করিতে পারি জয়।

6, (a) Frame sentences to illustrate the use of—

সোনার সোহাগা ; হৃদয়পর্যাপ্ত ; বিন্দুবিসর্গ ; কড়ার গড়ায়।

(b) Fill up the blanks—

অভ্যকার——যিনি সভাপতির——গ্রহণ করিয়াছেন, তাঁহার——না জানে, এমন——বিরল। দেশের জন্ত তিনি অগ্নানবদনে——ররণ করিয়াছেন। অস্ত্রাঘের——যুদ্ধঘোষণা করিয়া তিনি যে পরিমাণ——লাভ করিয়াছেন, তাহা ইতিহাসের——বর্ণাক্ষরে লিখিত হইবে।

(c) Substitute a single word for each of the following :—

যিনি পরিণাম দেখিয়া কার্য করেন না ; যিনি পরের মুখ চাহিয়া কাজ করেন ; যে অন্তকে গোষণ করে।

7. Translate *Either* of the following passages into Bengali :—

(a) With half a million of soldiers Napoleon crossed the Niemen, and through fearful difficulties prosecuted his perilous enterprise even to Moscow, but found arrayed against him the destructive agencies of fire, famine and frost. He commenced his retreat over the wasted route by which he had advanced, and before he again reached Poland, his army perished. The sufferings of the men during the retreat were frightful.

Through the immense plains covered with snow, an endless, column of wretches, nearly all without arms, marched in disorder, falling at every step on the ice, near the carcasses of their companions.

(b) It was the characteristic of Venkata Raman that his enthusiasm for Physics and the English language was coupled with an indifference to other subjects of study. He preferred carpentry to the study of Sanskrit grammar and was inconsolable when his father was unable, owing to lack of money, to purchase for him the materials with which to build an electric machine at home. Such enthusiasm for unacademic pursuits and a distaste for the subjects usually considered necessary for general culture proved a source of serious anxiety to his teachers.

8. Write an essay in Bengali on any *one* of the following subjects :—

- (a) Life is action and not contemplation.
- (b) The industrial regeneration of Bengal—its importance—consequences of its neglect.
- (c) Modern Bengali poetry.

Sanskrit (B)—Pass—First Paper.

1. EITHER, Write in short the speech which Arjuna made before Indra, disguised as an old ascetic, when the latter advised him to give up weapons and to practise penance to get salvation.

Or, Who are the persons entitled to read Manu Smṛiti? Give the definitions of উপাধ্যায়, আচার্য্য, গুরু and ঋষিক্ as stated by Manu.

2. Translate into English—

- (a) দুঃকষ্টান্ দীব্যতা রাজ্ঞা রাজ্যমাস্মা বয়ং বধুঃ ।
নীতানি পণতাং নুনমীদৃশী ভবিষ্যতা ।
- (b) বিজিতা যঃ প্রাজ্যায়চ্ছত্রদানকুরানকুপাং বহু বাসবোপমঃ ।
স বহুবাসাংসি ভবামুনা হরনকরোতি বহুং ন কথং ধনঞ্জয়ঃ ।
- (c) আ সমাপ্তেঃ শরীরস্ত বহু শুভ্রবতে শুক্লম্ ।
স গচ্ছতঃস্মা বিপ্রো ব্রহ্মণঃ সত্য শাশ্বতম্ ।

(d) বাগাদিষু পশুবাগাদিবধাৎ ন সৰ্বপ্রাণিপ্রিয়তা সম্ভবতি। তস্মাদ্ বাগাদিনা বিনাপি প্রণবাদিজপনিষ্ঠো নিম্নরতীতি জপপ্রশংসা।

What other case-ending is possible in ভূরিক্‌ in (a)? Account for the case-endings in সমাপ্তে: in (c). What will be the form if অা and সমাপ্তে: in (c) are combined in a compound (সমাস)? Derive কুপ্যন্ and শাশ্বতন্।

3. Give the Sanskrit equivalents for any *five* of the following :—

যন্তা; কৃষ্ণবস্মা; সমাহিতঃ; উদযান্; বিবিভক্তন্; অধিক্ষেপঃ; অক্ষস্; and গতস্ময়ঃ।

4. *Explain EITHER the Group A or the Group B. (One of the extracts must be explained in Sanskrit)—

GROUP A.

- (a) ন সময়পরিরক্ষণং ক্ষমং তে নিকৃতিপরেষু পরেষু ভূরিধায়ঃ।
অরিষু হি বিজয়ার্থিনঃ ক্ষিতীশা বিদধতি সোপাধি সন্ধিদুৰ্গানি।
- (b) বিচ্ছিন্নাভিলাসং বা বিলীয়ে নগম্‌র্জনি।
আরাধ্য বা সহস্রাক্ষমযশঃশল্যমুক্তরে।
- (c) সাধ্যায়েন ব্রতৈর্হোমৈশ্চৈবিত্তোনেজ্যায় হতৈঃ।
মহাবৈজ্ঞেচ বৈজ্ঞেচ ব্রাহ্মকায় জিয়তে তনুঃ।

GROUP B.

- (a) হুথেন লভ্যা দধতঃ কৃষীবলৈরকৃষ্টপচ্যা ইব সন্তসম্পদঃ।
বিতথতি ক্ষেমমদেবমাতৃকাশ্চিরায় তস্মিন্ কুপবচকাসতি।
- (b) ন জ্ঞাতঃ তাত! যত্নস্ত পৌৰ্ব্বাপর্যমমুখ্য তে।
শাসিতুং যেন মাং ধমং যুনিভিস্তল্যামিচ্ছসি।
- (c) পঞ্চানাং ত্রিষু বর্ষেষু ভূয়াসি গুণবন্তি চ।
যত্র স্যাহ সোহত্র মানাহঃ শূদ্রোহপি দশমোঃ গতঃ।

Expond the samasa in ভূরিধায়: in (a). Group A; derive বিচ্ছিন্নাভিলাসং in (b), Group A; account for ঙ্ in কৃষীবলৈঃ and absence of ঙ্ in দধতঃ in (a), Group B; account for the case-endings in তে and যুনিভিঃ in (b), Group B; give the লোট্‌ second person singular of the root in শাসিতুং।

5. Give the idea contained in any *three* of the following :—

- (a) সমুদ্রয়নভূতিমনার্বসংগমাধ্বং বিরোধোহপি সমং মহাজ্ঞতিঃ ।
- (b) ন বাধতেহস্ত ত্রিগণঃ পরম্পরম্ ।
- (c) অমর্যশ্চেহ জনস্ত জ্ঞানা ন জাতহাদে'ন ন বিধিবাদয়ঃ ।
- (d) অবিজ্ঞাতেহপি বর্কো হি বলাৎ প্রহ্লাদতে মনঃ ।
- (e) কামাজ্ঞতা ন এশস্তা ন চৈবেহাস্ত্যাকামতা ।

6. Give the substance of any *one* of the following :—

- (a) আপাতরম্যা বিবরাঃ পৰ্বন্তপরিতাপিনঃ ।
- (b) পরৈরপৰ্যাসিতবীৰ্যসম্পদাং পরাভবোহপ্যুৎসবং এব মানিনাম্ ।
- (c) ন তথৈতানি শক্যন্তে সংনিবৃত্তমসেবয়া ।
বিষয়েষু প্রজুষ্টানি ষণ্মাজ্ঞানেন নিত্যাশঃ ।

7. Translate into Sanskrit any *five* of the following :—

(a) One day when the queen was walking by the side of the river, a little fish lifted its head out of water and said, "Your wish shall be fulfilled."

(b) So the king went to the forest with his queens and attendants, plucked the seven mangoes that grew upon one branch and gave a mango to each of the queens to eat.

(c) Here, he distinguished himself by his intelligence and ability and won the hearts of his students by his charming manners. Indeed he was a great scholar and an ideal teacher.

(d) The poor man lay there so helpless that he hardly knew what was going on. His eyes were shut and he was half conscious of his pain and misery.

(e) One day the king was out hunting, when he saw a lady of peerless beauty cross his path. He fell in love with her, brought her to his palace and married her.

(f) The chief minister was a merciful man. Instead of killing the six queens he hid them in a cave which was on the side of a hill. In course of time the eldest queen gave birth to a child.

Sanskrit (B).—Pass—Second Paper.

1. EITHER, How does the *Senapati* describe the virtues of hunting in the *Sakuntala*? By what arguments does *Dusyanta* discourage him?

• Or, Give after Kalidasa a description of the couple Marica and Aditi. What blessings are uttered by them to Sakuntala ?

Or, How is the fire-incident brought about in the fourth act of the Ratnavali ? How does it help the union of the king with Sagarika ?

2. Translate into English *one* of the following groups :—

GROUP A.

- (a) ইদমনিশিতৈরন্তস্তাপাধিবর্ণনীকৃতং
 • নিশি নিশি ভূজন্তস্তাপাঙ্গপ্রসারিতিরশ্রুতিঃ ।
 অনভিলিভিতজ্যাধাতাঙ্কং মুহমণিবন্ধনাং
 কনকবলয়ং শ্রুতং শ্রুতং ময়া প্রতীসার্যতে ।
- (b) কিং দেব্যাঃ কৃতদীর্ঘরৌষমুখিতম্মিত্তমিতং তদুখং
 ত্রস্তাং সাগরিকাং হৃসন্তুতরুণা সন্তর্জমানাং তথা ।
 বদ্ধা নীতমিতো বসন্তকমহং কিং চিন্তয়ামীত্যধো
 সর্বাকারকৃতব্যথাঃ ক্ষণমপি প্রাপ্নোমি নো নিবৃতিম্ ।

(c) অনুবাচ । কথং সমুদ্রব্যবহারো সার্থবাহো ধনমিত্রো নাম নৌবাসনে বিপন্নঃ ।
 অনপত্যশ্চ কিল তপস্বী । রাজগামী তস্তার্থসংকল্প ইত্যেতদমাতোন নিধিতম্ । কষ্টং খণনপত্যতা ।
 বেত্রবতি, বহুধনত্বাৎ বহুপন্নীকেন তত্রভবতা ভবিতবাম্ । বিচার্যতাং যদি কাচিদাপন্নসত্ত্বা তস্ত
 তর্থাহু স্তাৎ ।

GROUP B.

- (a) কঠে কৃতাবশেষং কনকনয়মধঃ শৃঙ্খলাদাম কর্ণন
 ক্রান্তা দ্বারাণি হেলাচলচরণরণংকিঙ্কিণীচক্রবালঃ ।
দন্তাতকোহঙ্গনানামমুহুতসরণিঃ সংজ্ঞাদদ্বপালৈঃ
 প্রজট্টোহয়ং প্রবজঃ প্রবিশতি নৃপতেমন্দিরং মন্দুরায়াঃ ।
- (b) অভিজ্ঞনবতো ভর্তৃঃ স্নাত্যে স্থিতা গৃহিণীপদে
 বিভবগুরুভিঃ কুট্যন্তস্ত প্রতিক্ষণমাকুলা ।
 তনয়মচিরাৎ প্রাচীবার্কং প্রনয় চ পাবনং
সম বিরহজাং ন ত্বং বৎসে শুচং গণয়িষ্যসি ।

(c) কথং প্রতিষ্ট এব জলনং বৎসরাজঃ । তদ্যমপি দৃষ্টরাজপুত্রীবিপত্তেযু জমিহৈবান্নান-
মাহতোকতুর্হ । হা মহারাজ ! কিমিদমকারণমেব ভরতকুলং সংশয়ভূলামারোপিতম্ । অথবা
কি প্রলাপেন । অহমপি ভক্তিসদৃশমাচরামি ।

3. (a) Write grammatical notes on the underlined portions in question 2.

(b) Derive ব্রিক and আরোপিত.

(c) Expound the *samasa* in সর্বাচারকৃত্যে in Group A (b). What does the expression সর্বাচার refer to ?

(d) Change the voice of the last line of Group A (b) or Group B (b).

4. Answer any two of the following :—

(a) What incident of the Ramayana is referred to in the Ratnavali and in what connection ?

(b) Quote or give in Sanskrit the substance of the *sloka* in which Nature's gift of decorative things to Sakuntala is described.

(c) Render into Sanskrit the following verse and indicate its context :—

তুচ্ছা গ জাগে হিঅজং মহ উপ কামো দিবা বি রত্তিং বি ।

নিষ্কিণ তবই বলীঅং তুহ বৃত্তমণোরহাই অঙ্গাই ।

5. Annotate any four of the following :—

(a) দ্বীপদ্বন্দ্বিতরপরা প্রতিষ্ঠাতি সা মে ।

(b) ভাবস্থিরাপি জননাস্তরসৌহৃদানি ।

(c) ত্রিশকুরিবাস্তরালে তিষ্ঠ ।

(d) তত্র গতস্ত ব্রাহ্মণবালকস্ত মে স্ততিবাচনং কিমপি ভবিষ্যতি ।

(e) তদ্বয়ঃ শিশুশু কশ্যাপিকারিতঃ ধন্যানাং শ্রবণপথ্যভিষ্মমেতি ।

(f) সাধু কোশলপতে, সাধু । মৃত্যুরপি তে জাযাঃ যন্ত হি রিপবোহপি পুরুষকারমেব
বর্ণয়ন্তি ।

6. তৎপ্রত্যয়াদ্যার্থং যোগকরায়ণেন বহুশঃ প্রার্থমানাপি সা সিংহলেখরেন বাসবদত্তাশক্তিত্ত-
থেন্দং পরিহরতা ন দত্তা ।

Elucidate.

7. Explain, with reference to the context, one of the following *slokas* :—

(a) নিবময়সি বিমার্গপ্রস্থিতানন্তদন্তঃ
প্রশময়সি বিবাদং কলসে রক্ষণায় ।
অতমুখু বিভবেষু জাতয়ঃ সন্ত নাং
দ্বয়ি তু পরিসমাপ্তং বন্ধুকৃত্যং জনানাম্ ।

- (b) অত্যাশংসমতস্তাসি নভসঃ পারং প্রয়াতে রবা-
বাহানীং সময়ে সমঃ নৃপজ্ঞনঃ সারস্তুনে সম্পত্তন ।
সম্প্রত্যেষ সরোরহদ্ব্যতিমূৰ্খঃ পাদাংস্তাসেবিতুং
ক্ৰীড়াংকৰ্ণকৃতো নৃশাশ্বরনন্তেশোরিবোৰীকতে । *

8. Translate into Sanskrit any *five* of the following :—

(a) “If you will only do as I bid you, I will take you in my beak to a fine large pond and put you into it,” answered the crane.

(b) “So long as you trust me, I won’t eat you. But if you don’t believe me that there is such a pond, send one of you with me to go and see it.”

(c) Then they trusted him, and handed over to him one of them—a big fellow, blind of one eye, whom they thought sharp enough in any emergency.

(d) Him the crane took with him, let him go in the pond, showed him the whole of it, brought him back and let him go again close to the other fish.

(e) He told them all the glories of the pond. And when they heard what he said, they exclaimed, “All right, sir ! you may take us with you.”

(f) Then the crane took the old fish first to the bank of the pond and alighted in a Varana tree. He threw it, struck it with his beak and killed it.

(g) In that manner he took all the fish, one by one, and ate them. But there was still a crab left behind there ; and the crane thought he would eat him too.

Sanskrit (B).—Pass—Third Paper.

1. Translate into English any *two* of the following passages :—

(a) নিরপরাধমধুরবয়সি বর্তমানস্ত তস্ত পিতা পরলোকময়াসীৎ ১ জননী পরং শোক-
বিহ্বলাহপি ধৈর্যমালম্ব্য কুচ্ছাদ্ বালকং সংবধয়ন্তী দারিদ্ৰ্যোপাভিসম্ভ্রষ্টাহপি তনয়াভাদয়কাজিঙ্গী
যথাশক্তি বলিনা দৈবভাষ্যতিথেনাতিথীংচ্ছাতাসীৎ । বালকোহপি অবিদিতদুঃখগুণান্তঃ, নগরে
তত্র ভক্ত প্রবর্তমানাম্ সন্তান্ সঙ্গীভগোজীবু চ যদ্ যচ্ছোভতি তৎ সৰ্বং জনৈশ্চ যথাশক্তি বর্ণয়ন্ তন্ম
চ মুহূৰ্ণপাখ্যাতঃ ক্বেতরপক্ষশলাহন ইবাবৰ্ণিষ্ট । কদাচিদ্ বাড়ীজদত্তাতিথৌ যৌ বিপ্রৌ ভূবঃ
ভ্রমন্তৌ একস্মাদনিবাসায় তদগৃহমাগতো .সকৃদাকর্ণনেনৈব সৰ্বমপি হৃদি ধীরয়ন্তমিমাং বালকমবেক্ষ্য
বিশ্ময়াবিষ্টৌ তদ্ব্যতয়মবোচতাম্—“ভোঃ সাধি ! নৈব সাধারণৌ বালকঃ” ইতি ।

(1) নির্বিশেষ পাণিনিভাষ্যং বহুমন্তমানো হিমালয়ং গচ্ছা তীত্রেণ তপসা তরুণেন্দ্রশেখর-
মুপাসিষ্ট। পরিভূষ্টোক্ত পুরাণাতোঃ সর্ববিজ্ঞানং নবং ব্যাকরণমলম্ব। পুনঃ পাটলীপুত্রমভ্যাত্য
বরকচিমেব বাদায় আহ্বাস্ত। তদ্যোশ্চ এবুন্তে বাদে বাসরাঃ সপ্ত ব্যতীৰ্ণঃ। অষ্টমেহনি পাণিনি-
বরকচিনা বিজিগ্যে। তদানীমধরতলস্থিতঃ শত্ৰুর্যোঃ হস্তারমকৃত। অমুপদমেব ভৈরবঃ ব্যাকরণং
ভূবি প্রনষ্টমভূৎ। সৰ্বে চ তে বরকচিশ্রমুখাঃ পাণিনিনা পরাজিতা মুখাশ্চাত্তুবন্।

(c) যদেতদমুমরণং নাম তদভিনিম্বলম্। অবিষজ্ঞনাচরিতং এব মার্গঃ। যোহবিলাসিত-
মেতৎ, অজ্ঞানপদ্ধতিরিয়ং, মৌখ্যখলিতমিদং যত্নপরতে পিতরি ভ্রাতরি সূহৃদি ভর্তরি বা প্রাণাঃ
পরিভাজান্তে। স্বয়ং চেৎ জহতি ন পরিত্যজ্যাঃ। অত্র হি বিচার্যমাণে স্বার্থ এব প্রাপপরিভ্যাগোহ-
রননহশোকপ্রতীকারবাদায়নঃ। উপরতন্ত তু ন কমপি গুণমাবহতি। ন তাবন্তস্তায়ং
প্রত্যক্ষীবনোপায়ঃ, ন ধর্মোপচয়কারণং, ন শুভলোকোপার্জনহেতুঃ, ন নিরয়পাতপ্রতীকারঃ, ন
দর্শনোপায়ঃ, ন পরম্পরমাগমনিমিত্তম্।

2. (a) Account for the case-endings in any *three* of the words underlined—

(i) চন্দ্রলোকং নীতন্তেন পুরুষেণ পুণ্ডরীকবিগ্রহঃ।

(ii) স গন্ধর্বানাতোভ্যং গ্রাহয়ামাস।

(iii) মাস আন্ততে দেবদন্তেন।

(iv) হারয়তি কটং ভূতান্।

(v) কান্তিক্যা আগ্রহারণী মাসে।

(vi) ভক্তায় ধারয়তি মোক্ষং হরিঃ।

(b) Name and expound the *samasas* in any *three* of the following with comment on grammatical peculiarities :—

(i) পুণ্যাহম্ ; (ii) মহারাজ ; (iii) ধৃতগন্ধি ; (iv) দেশান্তরম্ ; (v) ত্রিরাত্রম্।

(c) Substituted *one* word for any *two* of the underlined expressions :—

(i) পুনঃ পুনঃ পিবতি বারি পণ্ডঃ।

(ii) শিষ্যং পুত্রমিব আচরন্ মহৎ বশঃ প্রাপ্তবান্।

(iii) ধনং লব্ধু মিচ্ছন্ নৃপ-সকাশং গতঃ।

(d) Distinguish the meanings of any *two* pairs of the following words :—

স্বৰী and স্বরী ; উপাধ্যায় and উপাধ্যায়ানী ; কজিরী and কজিরা ; আত্রঃ and
আত্রম্।

(e) Derive any *four* of the following indicating the sense :—

বিধুভদ্র ; শোকাপহৃদ ; মেঘর ; স্মৃহয়ানু ; পোরস্তা ; হৈয়দবীন ; জনতা ; পোন-পুনিক ।

(f) Decline any *five* of the following :—

অরিহন্ in accusative plural ; সমাচ্ in genitive plural ; দিব্ in nominative singular ; বিশ্ববাহ্ in accusative plural ; চতুর্ in genitive plural ; ইতর in nominative singular (neuter) ; ভরী in nominative singular.

(g) Conjugate any *four* of the following roots :—

ক্রী (আত্মনেপদ) in লঙ first person singular ; অশ্ in লোট্ second person singular ; তৃহ্ in লোট্ third person singular ; ঙ্গ্ in লট্ third person singular ; জাগ্ in লঙ third person singular ; শাস্ in লট্ third person singular.

(h) Correct the errors in any *four* of the following :—

(i) পুত্রং দিদৃক্ষতি মাতা ।

(ii) বন্ধনাপুচ্ছন্ এবাসং গভঃ ।

(iii) কলহারন্তঃ পরস্পরং গ্রহিতাঃ কর্মকরাঃ ।

(iv) উপাধ্যায়ঃ পিতৃীয়মাণস্ত বিতাঃ প্রতিভাস্তি ।

(v) জ্ঞাতা সঞ্চরতন্তু পুরো দহ্মাঃ আত্মসীং ।

(vi) ভূতবে মাহভিক্রোধীঃ ।

3. EITHER, Write a note on the Bhagavadgita and its teachings, incidentally discussing the question of interpolation.

Or, Give a short summary of the contents of the Ramayana.

Or, Write an account of *one* of the Puranas.

4. EITHER, Write a note on Magha or Bharavi or Bhatti.

Or, Discuss the relative chronology of the Ramayana and the Mahabharata.

5. Write short notes on any *five* of the following :—

Narayana as a prose-writer ; Buddhasvamin ; Somadeva ; Dasa-kumaracarita ; Harsacarita ; Kavyamimamsa ; Amaru ; Gitagovinda.

History (B).—Pass—First Paper.

Answer any six questions.

1. Elucidate *one* of the following passages :—

(a) 'Early Indian history, as a whole, cannot be viewed in true

perspective until the non-Aryan institutions of the South receive adequate treatment.'

(b) 'India offers unity in diversity.'

2. Sketch the history of the Maurya empire and account for its downfall.

3. Give an account of Alexander's invasion of India and describe his wars with Indian tribes and princes.

4. Briefly describe the rule of the Kusanas in India with special reference to Kaniska.

5. Give a short account of Southern India from the time of Asoka to the downfall of the Andhras.

6. Write critical notes on any three of the following :—

(a) The Huna invasion of India.

(b) The Gandhara School of Art.

(c) Fa-Hian's account of Indian religious toleration.

(d) The Gurjara Pratihara Kingdom.

(e) The Saka Satraps of Ujjain.

(f) Coins of Samudra Gupta.

7. Give a critical estimate of Sultan Mahmud and his Indian campaigns.

8. Give an account of Hindu-Muslim relations in India during the Turco-Afghan period.

9. Compare the policy of Akbar with that of Aurangzeb and account for the success of the former.

10. Sketch the career of Sivaji and give an account of his system of administration.

11. Discuss critically one of the following passages :—

(a) 'The period of Indian history between 1761 and 1818 was one of transition'.

(b) 'The French East India Company was far inferior to its English rival in constitution, enterprise and wealth.'

(c) 'Ranjit Singh the founder of the Sikh State of Lahore was a remarkable man.'

12. Give an account of the material and moral progress in India under the East India Company.

13. Sketch the history of the grant of self-government in British India from 1858 to 1919.

14. Write critical notes on any three of the following :—

(a) The Last Mysore War.

(b) British policy in Afghanistan from 1881 to the present day.

- (c) The annexation of Burma.
 - (d) Causes of the Indian Mutiny.
 - (e) Third Maratha War.
 - (f) Suppression of the Pindaris.
-

HISTORY (B) — Pass—Second Paper.

Answer any six questions only.

1. Briefly describe the main features of the foreign policy of Louis XIV.
2. Critically examine the statesmanship of Frederick the Great of Prussia.
3. "The fundamental policy of Peter the Great was to make Russia, a European power" (RIKER). What steps did he adopt to achieve this object ?
4. What led to the Partitions of Poland ? What were the results of the Partitions ?
5. Discuss the chief causes of the decline of the Spanish power during your period.
6. "The fundamental cause of the American Revolution was the rise of nationality" (RIKER). Explain. What were the effects of the American Revolution on European politics ?
7. Write notes on any four of the following : —
 - (a) "The Spirit of Laws."
 - (b) "The Encyclopaedists."
 - (c) Rousseau.
 - (d) The Civil Constitution of the Clergy.
 - (e) Mirabeau.
 - (f) The Girondins.
8. Describe Napoleon as (i) a reformer, (ii) an imperialist.
9. Discuss briefly the results of the French Revolution.
10. How would you describe the empire of Napoleon at the height of his power ?
11. Why are the territorial adjustments at the Congress of Vienna 1815 criticised so severely ?
12. What is the importance in history of—
 - (a) The Continental System of Napoleon.

- (b) Louis XIV's Chamber of Reunions.
 - (c) The Treaty of Utrecht.
 - (d) The failure of Sweden to establish an empire.
-

HISTORY (B)—Pass—Third Paper.

Not more than six questions to be attempted.

1. "In the political world the period 1815-50 seemed to have been a failure." Explain.
 2. Sketch the career of Bismarck.
 3. "The partition of Africa is one of the most extraordinary facts of the period (1876—1914)." Expand.
 4. "The establishment of British control over Egypt forms a curious chapter in British empire-building." Elucidate.
 5. "The Sino-Japanese war was the critical and decisive event in the modern history of the Far East, and from it followed consequences of fundamental importance."
What were the consequences?
 6. "In Russia, in Japan, in China, in Europe also the Russo-Japanese war produced its effects." Examine.
 7. What were the causes of the last Great War?
 8. "The moral defects of the Treaty of Versailles are no more glaring than the practical." Explain.
 9. Write a short essay on the anti-slavery movement in America.
 10. Write notes on any four of the following :—
 - (a) The emancipation of Belgium.
 - (b) The Peace of Paris (1856).
 - (c) Nihilism.
 - (d) Mazzini.
 - (e) The battle of Sedan.
 - (f) The Boxer Rebellion.
 - (g) The Dardanelles Campaign.
 - (h) The "Fourteen Points".
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PHILOSOPHY (B)—Pass—First Paper.

Answer any five questions.

1. How does introspection differ from observation? Why do the behaviourists object to the use of the introspective method? Do you accept the objection as valid?

2. How would you distinguish between the Subconscious and Unconscious? Give an example of each.

3. Show the relation of perception to sensation. Indicate the conditions in which one may have illusion in stead of perception.

4. What is the special characteristic of imagination as contrasted with memory and thinking? Indicate the ways in which imagination may help human life.

5. What is inattention psychologically? What are the possible causes of inattention? How was it psychologically possible for Julius Cæsar to dictate many letters at a time?

6. Give the general characteristics of emotions. How did James try to explain emotions?

7. What is a voluntary action? Illustrate how it differs from an ideomotor action. What is the general effect of repetition on a voluntary action?

8. Write notes on any four :—

- (a) Kinaesthetic Sensations.
- (b) Empathy.
- (c) Conditioned reflex.
- (d) Personality.
- (e) Trial and error learning.
- (f) Concept of intelligence.

PHILOSOPHY (B)—Second Paper.

A.

Answer any three questions.

1. Give a clear idea of the subject-matter with which Ethics deals. What is the good of a study of Ethics?

2. Explain how freedom (of will) is essential to morality. How can you prove that such freedom is a fact?

3. Give a critical estimate of the Ethical Standard advocated by hedonism.

4. Examine critically the retributive theory of punishment. Do you support capital punishment ?

5. How do you conceive of the relation between society and individual ? Is morality possible outside society ?

B.

Answer three questions, either from Group I or from Group II.

GROUP I : *Indian Philosophy.*

6. Bring out the common features of Indian philosophical systems and discuss whether the charge that they are pessimistic on the whole is justified.

7. Give an exposition of the sources of valid knowledge as advocated in the following systems :—

Carvaka ; Jaina ; Nyaya.

8. How does the Sankhya prove the unity of Prakrti and the multiplicity of Purusas ?

9. Give an account of the Sankhya theory of causation, and indicate the place Purusa in the scheme of the evolution of Prakrti.

10. How does the Sankhya disprove and the Yoga prove the existence of God ?

11. Either, Explain after the Yoga the mechanism of the bondage and the liberation of the self.

Or, Classify and explain the Yogangas (means of Yoga), noting in some detail the character of Samadhi.

GROUP II : *Islamic Philosophy.*

12. Bring out the distinction between the orthodox Islamic attitude and the Mutazilite attitude towards the attributes (*sifat*) of God.

13. Critically examine al-Farabi's proof of the existence of God.

14. Give a critical exposition of Ibn Roshd's (Averroes's) conception of the relation between Form and Matter.

15. Expound al-Gazali's idea of God with special reference to the Divine will.

16. State and compare the views of Ibn Sina (Avicenna) and Ibn Roshd (Averroes) about the nature of the Human Soul.

17. Write short notes on any two of the following :—

- (a) Ibn Khaldun's conception of History.
 - (b) Ibn Miskawaih's ethical position.
 - (c) al-Kindi's theory of knowledge.
 - (d) Sources of law and morality in Islam.
 - (e) Ibn Baddja's (Avempace's) theory of human immortality.
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PHILOSOPHY (B).—Pass—Third Paper.

Answer any five questions.

1. What is the meaning of experience ?

What do you understand by saying that Philosophical knowledge is the Analysis, Criticism and Rationalisation of Experience ?

2. What is judgment ? What are its main characteristics ?

3. How are deduction and induction related as types of inference ?

4. What is the relation between Causality and Finality ? Discuss the statement, 'no causality, no finality', and give illustrations.

5. Explain clearly the meaning of 'Substance', and discuss the implications of your definition.

6. Discuss the nature and origin of Reason. Describe, with illustrations, the part played by Reason in the development of human knowledge.

7. Explain the relation between God and the World, as you conceive it, with special reference to the doctrines of Transcendence and Immanence.

8. Indicate the main types of realism and state with reasons whether you agree with any of them.

ECONOMICS (B).—Pass—First Paper.

Answer any six questions.

1. The following wrong example was given by a candidate in illustration of the law of demand :

Price (rupees).	Demand (units).
10	10
9	9
8	8
7	7
6	6

Correct the above table by suitable changes in the amount of demand, and give reasons for your answer.

2. Show how *consumer's surplus* is related to individual demand price and market price, and how it varies with the variation of either.

3. What do you mean by Organisation of Production? Is a merchant, a speculator or a banker an organiser?

4. Discuss the nature of speculation, showing that it is not gambling, but it performs, within limits, a necessary economic function.

5. Explain why an increase of population tends to lower wages but not rent.

6. Show how the law of supply and demand determines interest in the same way as the value of a commodity.

7. Explain how an excess of either imports or exports tends to correct itself.

8. What is credit? Show how credit can be used as a medium of exchange.

9. Discuss the main considerations which usually underlie the system of taxation in a country.

10. "There are potent restrictions on the price-fixing power of the monopolist." Elucidate the statement.

* ECONOMICS (B)—Pass—Second Paper.

Answer any six questions.

1. Clearly bring out the distinction between *legal* and *political* sovereignty. Illustrate this distinction by reference to England.

2. Criticize the social contract theory of the origin of the State.

3. Distinguish between Civil and Political rights. Enumerate some of the obligations of a citizen.

4. Explain carefully the statement that the systems of 'Separation of powers' and 'Check and balance' prevent chaos of authority and unify governmental powers'.

5. Discuss the necessity and justification of the party system in a democracy.

6. Discuss the privileges of the House of Commons in Britain.

7. Contrast the salient features of the Constitutions of Great Britain and the United States.

8. Discuss the constitution and functions of the Legislative Assembly in India.

9. "A second Chamber is almost indispensable in a federation such as the United States is." Fully explain.

10. Give a brief account of the system of electorates at present prevailing in India.

ECONOMICS (B)—Pass—Third Paper.

Answer any six questions.

1. "At his best the Indian cultivator is as good as any in the world, while at his worst it can be said that his miserable condition is brought about largely by an absence of facilities for improvement which is probably unequalled in any other country." Elaborate this statement.

2. Write what you know about the marketing of jute or rice, and suggest ways and means by which the existing state of things can be improved.

3. Briefly trace the history of the co-operative movement in this country, and estimate the measure of its success and failure.

4. Discuss the chief difficulties of Indian industries, and briefly suggest how they can be removed or lessened.

5. What are the elements of strength and weakness of the Labour Movement in India?

6. Discuss the main features of the Indian population problem.

7. How is India's foreign trade financed? Discuss the part played by Exchange banks.

8. Describe in broad outlines the manner in which the rupee-sterling exchange is regulated.

9. Examine the position of tenants under the Permanent Settlement in Bengal.

10. What are the chief sources of revenue of the Central Government in India? Give a rough idea of the relative importance of the different items at the present day.

Mathematics (B)—Pass.—First Paper.

Answer six questions only, three from each Group.

GROUP A.

1. (i) If $\cos^{-1}x + \cos^{-1}y + \cos^{-1}z = \pi$, prove that
 $x^2 + y^2 + z^2 + 2xyz = 1$.

(ii) If $\tan\left(\pi \cos \frac{\theta}{2}\right) = \cot\left(\pi \sin \frac{\theta}{2}\right)$,

express $\sin \theta$ in its simplest form.

(iii) Eliminate x and y from the following equations :—

$$\cos x + \cos y = a, \cos 2x + \cos 2y = b, \cos 3x + \cos 3y = c.$$

2. (i) Prove that the radius of the circumcircle of the pedal triangle of a given triangle is $\frac{1}{2}R$.

(ii) Shew that the distance between the foot of the perpendicular from the vertex A of a triangle ABC on BC and the middle point of BC is given by $\frac{b^2 - c^2}{2a}$, ($b > c$).

(iii) If an equilateral triangle and a regular hexagon have the same perimeter, prove that their areas are as 2 : 3.

3. Sum the following series :—

$$(i) \cos \alpha + \cos(\alpha + \beta) + \dots + \cos\{\alpha + (n-1)\beta\}.$$

$$(iii) \sin^2 \alpha \sin 2\alpha + \sin^2 2\alpha \sin 3\alpha + \dots + \sin^2 n\alpha \sin(n+1)\alpha.$$

4. Prove that $\cos n\theta + i \sin n\theta$ is one of the values of $(\cos \theta + i \sin \theta)^n$ where n is a positive fraction. How many different values does it possess for such a value of n ? Write these down.

Prove the following, (n being a positive integer)

$$1 - \frac{n(n-1)}{2!} + \frac{n(n-1)(n-2)(n-3)}{4!} - \dots = 2^{\frac{n}{2}} \cos \frac{n\pi}{4}$$

$$n - \frac{n(n-1)(n-2)}{3!} + \frac{n(n-1)(n-2)(n-3)(n-4)}{5!} - \dots$$

$$2^{\frac{n}{2}} \sin \frac{n\pi}{4}$$

5. Shew that

$$2^{n-1} \cos^n \theta = \cos n\theta + n \cos(n-2)\theta + \frac{n(n-1)}{2!} \cos(n-4)\theta + \dots$$

n being a positive integer.

Write down the last term of the series in the right side.

Shew that $\frac{1}{2}\theta = \sin \theta - \frac{1}{3}\sin 2\theta + \frac{1}{5}\sin 3\theta - \dots$;
 $(-\pi < \theta < \pi)$.

Deduce from this relation a series for

$$\frac{1}{3\sqrt{3}} \text{ by putting in it } \theta = \frac{\pi}{3}$$

6. (i) Given $\sin x = n \cos(x + \alpha)$,
 expand x in ascending powers of n .

(ii) If $u = \log \tan \left(\frac{\pi}{4} + \frac{x}{2} \right)$

$$= x + \alpha_3 x^3 + \alpha_5 x^5 + \dots$$

prove that

$$x = u - \alpha_3 u^3 + \alpha_5 u^5 - \dots$$

GROUP B.

7. Determine the length of the perpendicular on a given line $ax + by + c = 0$ from a point $(x'y')$ outside it and shew that the expression $ax' + by' + c$ changes sign only when the point $(x'y')$ crosses the given line.

Find the co-ordinates of the middle points of the three diagonals of the complete quadrilateral formed by the lines

$$x=0, y=0, \quad \frac{x}{a} + \frac{y}{b} = 1, \quad \frac{x}{a'} + \frac{y}{b'} = 1;$$

and shew that these three points are collinear.

8. Obtain the equation of the bisectors of the angles between the lines $x^2 + 2bxy + cy^2 = 0$ and deduce from the equation that they are at right angles to each other.

A and B are two fixed points and P a movable point such that the lines PA and PB make a constant intercept on a given line parallel to AB. Determine the locus of P.

9. Find the equation of the polar of a point $(x'y')$ with respect to the circle $x^2 + y^2 = r^2$.

When will the points of intersection of the polar and the circle be (i) *real*, (ii) *imaginary*, (iii) *coincident*?

Shew that the equation to the pair of tangents from the origin to the circle $x^2 + y^2 + 2gx + 2fy + c = 0$

is $c(x^2 + y^2) = (gx + fy)^2$ and that of the chord of contact is $gx + fy + c = 0$.

10. Prove the following :—

(i) the locus of the intersection of two tangents to a parabola at right angles to each other is a straight line. How is this line related to the parabola?

(ii) The locus of the middle points of a system of parallel chords of a parabola is a straight line parallel to its axis.

(iii) The distance of the focus from the intersection of two tangents to a parabola is a mean proportional between the focal radii of the points of contact.

11. Obtain the equations of the *equi-conjugate* diameters of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, and transform this equation of the ellipse referred to these diameters as *co-ordinate axes*.

The *eccentric angles* of two points on an ellipse with $2a$ as the length of its major axis are ϕ and ϕ' and their join intersects the major axis at a distance c from the centre; prove that

$$\tan \frac{\phi}{2} \tan \frac{\phi'}{2} = \frac{c-a}{c+a}.$$

12. If e denotes the eccentricity of a hyperbola and e' that of its conjugate, shew that $\frac{1}{e^2} + \frac{1}{e'^2} = 1$.

Mention (without proof) any two *principal* properties of the hyperbola in which its asymptotes are involved.

Shew that the area of the triangle formed by the two asymptotes of the hyperbola $xy = a^2$ and the normal at a point $(x'y')$ on the hyperbola is $\frac{1}{2} \left(\frac{x'^2 - y'^2}{a} \right)^2$.

Mathematics (B)—Pass—Second Paper.

Only six questions are to be attempted, of which not more than three must be from one Group.

GROUP A.

1. (a) Find from first principles the differential coefficient of $\log_{10} x$.

(b) If $y = x^2$, when x is less than 1,

$y = x$, when x is not less than 1, but less than 2,

$y = \frac{1}{2}x^3$, when x is not less than 2,

show that y is continuous when $x = 1$, and when $x = 2$.

2. Find $\frac{dy}{dx}$ of any three of the following :

(1) $y = \sqrt{\cot^{-1} e^x}$,

(2) $y = \log \sec (ax + b)^3$,

(3) $y = x^3 \sqrt{\frac{x^2 + 4}{x^2 + 3}}$,

(4) $x = \frac{3at}{1+t^3}$, $y = \frac{3at^2}{1+t^3}$,

(5) $3x^4 - x^2y + 2y^3 = 0$.

3. (a) If x_1, y_1 be the portions of the axes of x and y intercepted by the tangent at any point (x, y) on the curve

$$\left(\frac{x}{a}\right)^{\frac{2}{3}} + \left(\frac{y}{b}\right)^{\frac{2}{3}} = 1,$$

show that $\frac{x_1^2}{a^2} + \frac{y_1^2}{b^2} = 1$.

(b) Show that the pedal equation of the parabola

$$y^2 = 4a(x+a) \text{ is } p^2 = ar.$$

4. (a) Find the asymptotes of $y^3 + x^2y + 2xy^2 - y + 1 = 0$.

(b) Show that for the curve $r = a(1 + \cos \theta)$, $\frac{\rho^2}{r}$ is constant,

ρ being the radius of curvature.

5. (a) Prove that $x^{\frac{1}{x}}$ has a maximum for $x = e$.

(b) If $y = \sin(m \sin^{-1} x)$, show that

$$(1-x^2) \frac{d^{n+2}y}{dx^{n+2}} - (2n+1)x \frac{d^{n+1}y}{dx^{n+1}} + (m^2 - n^2) \frac{d^n y}{dx^n} = 0.$$

GROUP B.

6. (a) Give a geometrical interpretation of

$$\int_a^b f(x) dx.$$

- (b) Find

$$\lim_{n \rightarrow \infty} \left[\frac{1}{\sqrt{2n-1^2}} + \frac{1}{\sqrt{4n-2^2}} + \frac{1}{\sqrt{6n-3^2}} + \dots + \frac{1}{\sqrt{2n^2-n^2}} \right].$$

7. Find any three of the following ;

(1) $\int \operatorname{cosec}^3 x \, dx,$

(2) $\int \frac{\sin x \cos x \, dx}{\sin^4 x + \cos^4 x},$

(3) $\int \frac{dx}{\sqrt{3x-x^2}-2},$

(4) $\int \frac{dx}{(x+2)\sqrt{x+3}},$

(5) $\int \frac{dx}{4+5 \sin x}.$

8. (a) Find the entire length of the curve

$$x^{\frac{2}{3}} + y^{\frac{2}{3}} = a^{\frac{2}{3}}.$$

(b) Find also the intrinsic equation of the curve, the arc being measured from the point for which $x=0$.

9. (a) Prove that the whole area between the four infinite branches of the curve

$$\left. \begin{aligned} x &= a \cos t + \frac{a}{2} \log \tan^2 \frac{t}{2} \\ y &= a \sin t \end{aligned} \right\} \text{ is } \pi a^2.$$

(b) Show that the surface of the solid generated by the revolution of the same curve about the x -axis is $4\pi a^2$.

10. (a) Find the curve for which the sum of the reciprocals of the radius vector and the polar subtangent is constant.

- (b) Solve any one of the following :—

(1) $\frac{dy}{dx} + \frac{y}{x} \log y = \frac{y}{x^2} (\log y)^2,$

(2) $(2x-2y+5) dy - (x-y+3) dx = 0.$

11. Solve any two of the following :

(i) $\frac{d^2 y}{dx^2} - 4 \frac{dy}{dx} + 3y = 2e^{3x},$

- (ii) $\frac{d^2y}{dx^2} + 2 \frac{dy}{dx} + 2y = xe^{-x}$,
 (iii) $\frac{d^3y}{dx^3} - 3 \frac{dy}{dx} + 2y = 0$.
-

MATHEMATICS (B).—Pass—Third Paper.

Answer six questions only, not more than four from the same Group.

GROUP A.

1. Find the specific gravity of a mixture of given weights of different substances whose specific gravities are given.

Three equal vessels A, B and C are half full of liquids of densities ρ_1 , ρ_2 and ρ_3 respectively. If now B be filled from A, and then C from B, find the density of the liquid now contained in C, the liquids being supposed to mix completely.

2. Prove that the common surface of two heavy homogeneous liquids, which do not mix, is a horizontal plane.

A square plate whose edge is 8 inches, is immersed in sea-water, its upper edge being horizontal and at a depth of 12 inches below the surface of the water. Find the whole thrust of the water on the surface of plate when it is inclined at 45° to the horizon, the mass of a cubic foot of sea-water being 64 lbs.

3. Find the conditions of equilibrium of a body partly immersed in a liquid and supported by a string attached to some point of it.

A body is floating partly immersed in a liquid, and the air in contact with it is suddenly removed. State, giving reasons, whether the body will rise or sink.

4. Describe the common pump and explain its action.

Explain the action of the siphon, and find the conditions which must hold so that the siphon can act.

5. If the pressures of two gases of the same temperature and volume v be p_1 and p_2 , prove that the pressure of the mixture of the two gases, when the combined volume is v , is $p_1 + p_2$, the temperature being unaltered.

At the sea-level, the barometer stands at 750 mm. and the temperature is 7°C ., while on the top of a mountain it stands at 400 mm. and the temperature is 13°C . ; compare the weights of a cubic metre of air at the two places.

6. Find the centre of pressure of a triangle immersed in homogeneous liquid with one side in the surface.

A square lamina is just immersed vertically in water, and is then lowered through a depth b ; if a be the length of the edge of the square, prove that the distance of the centre of pressure from the centre of the square is

$$\frac{a^2}{6a + 12b}$$

GROUP B.

7. Define :—azimuth, declination, ecliptic, hour angle.

Give a proof of the earth's rotation from the experiment of letting a body fall from the top of a high tower.

8. Describe the transit instrument, and explain how it is corrected for the various errors to which its readings are subject.

Supposing the earth to rotate with the same angular velocity as at present, but in the opposite direction, what would be the length of a mean solar day, and the number of mean solar days in the year?

9. Establish the law of refraction of a heavenly body, $x = K \tan z$, and find K when the latitude of the place of observation is known.

The meridian altitudes of a circumpolar star are 20° and 30° , and the corresponding corrections for refraction are $1' 40''$ and $1' 9''$; find the latitude of the place.

10. Explain the phenomenon of the seasons.

Assuming the mean distance of Venus to be .72, that of the earth being unity, apply Kepler's Laws to find the periodic time of Venus.

11. Prove that the effect of Parallax on a heavenly body is to depress it in the heavens. The sun's horizontal parallax being $8''.8$, find the true zenith distance corresponding to an observed zenith distance of 60° .

Obtain the height of a lunar mountain in the form $\frac{\delta^2}{2r \sin^2 \phi}$,

where δ is the projection of the distance between the bright summit of the mountain top and the line of separation of light and darkness on a plane perpendicular to the line of sight, r is the radius of the moon, and ϕ is the angle of elongation of the moon from the sun as seen from the earth.

12. State the causes of a solar eclipse, and explain under what circumstances it is (i) total, (ii) partial, and (iii) annular.

State the causes to which the equation of time is due. The times of the sun's rising and setting on a certain date are $6^h 34^m$ A.M. and $4^h 33^m$ P. M. respectively; find the equation of time.

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